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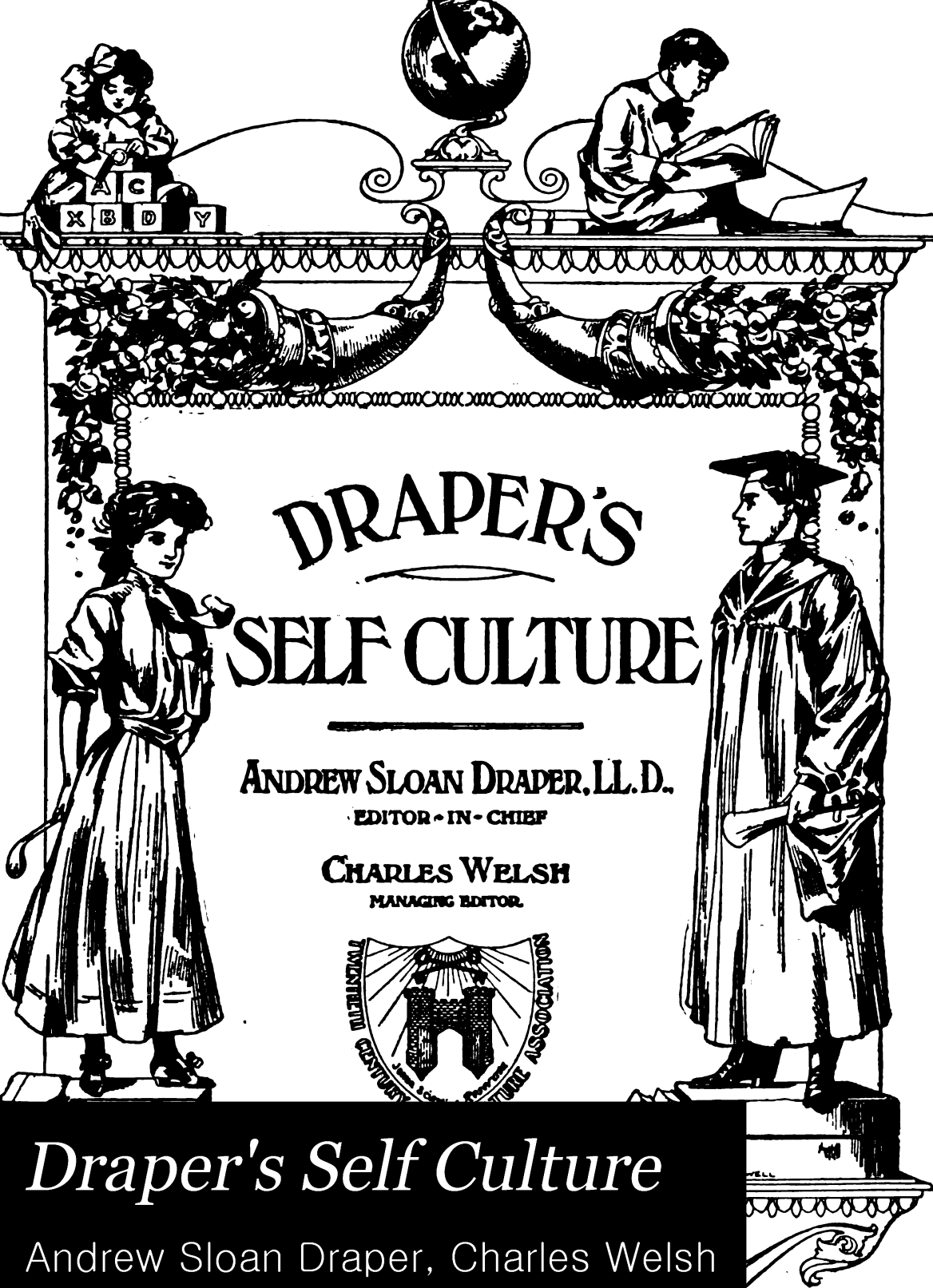
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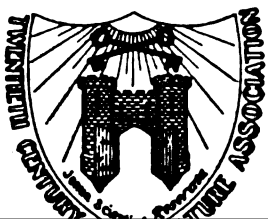
DRAPER'S SELF CULTURE

ANDREW SLOAN DRAPER, LL. D.

EDITOR - IN - CHIEF

CHARLES WELSH

MANAGING EDITOR.



Draper's Self Culture

Andrew Sloan Draper, Charles Welsh

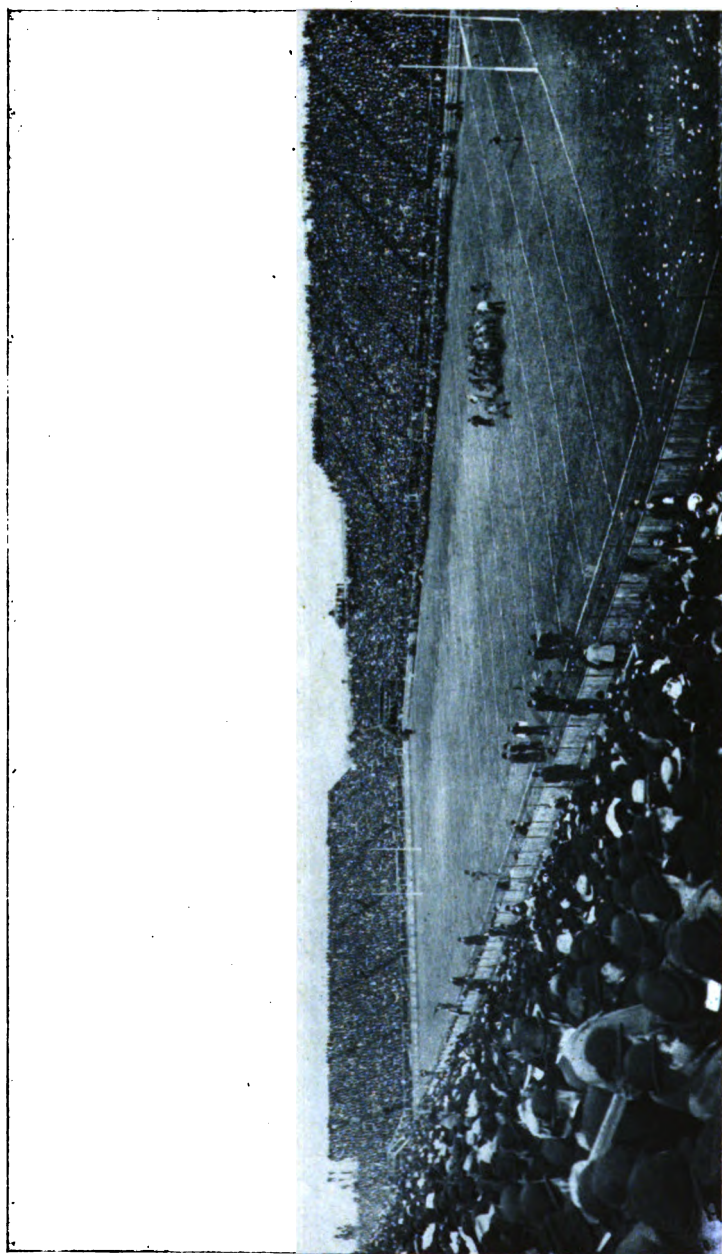


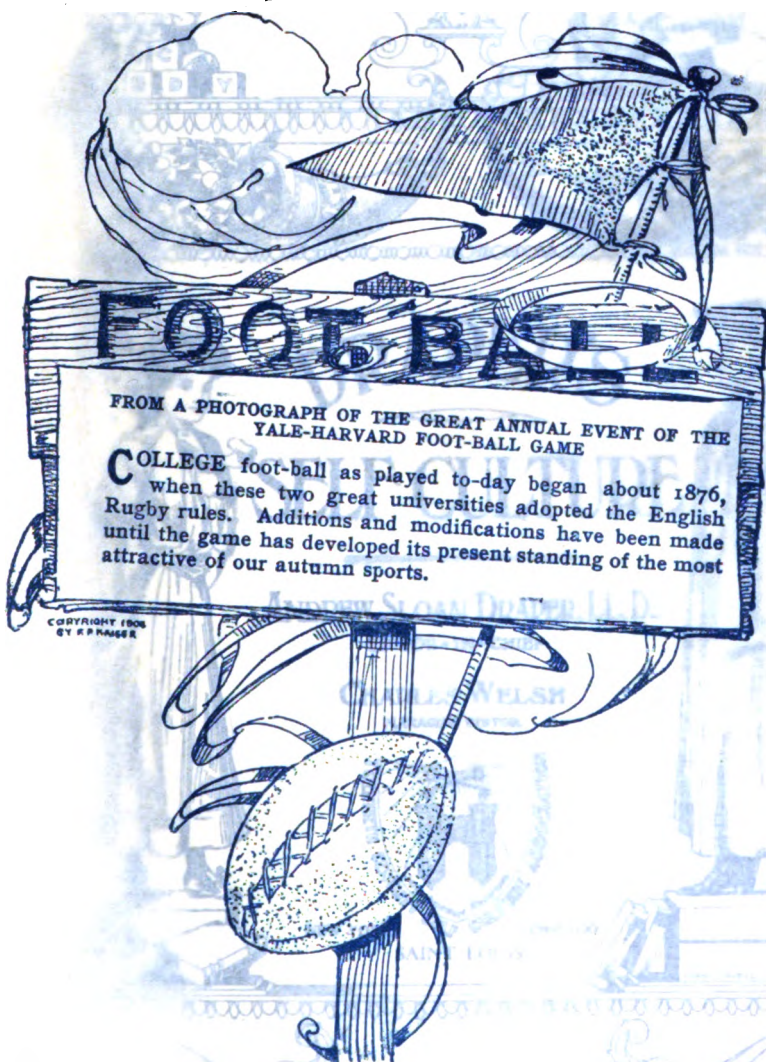


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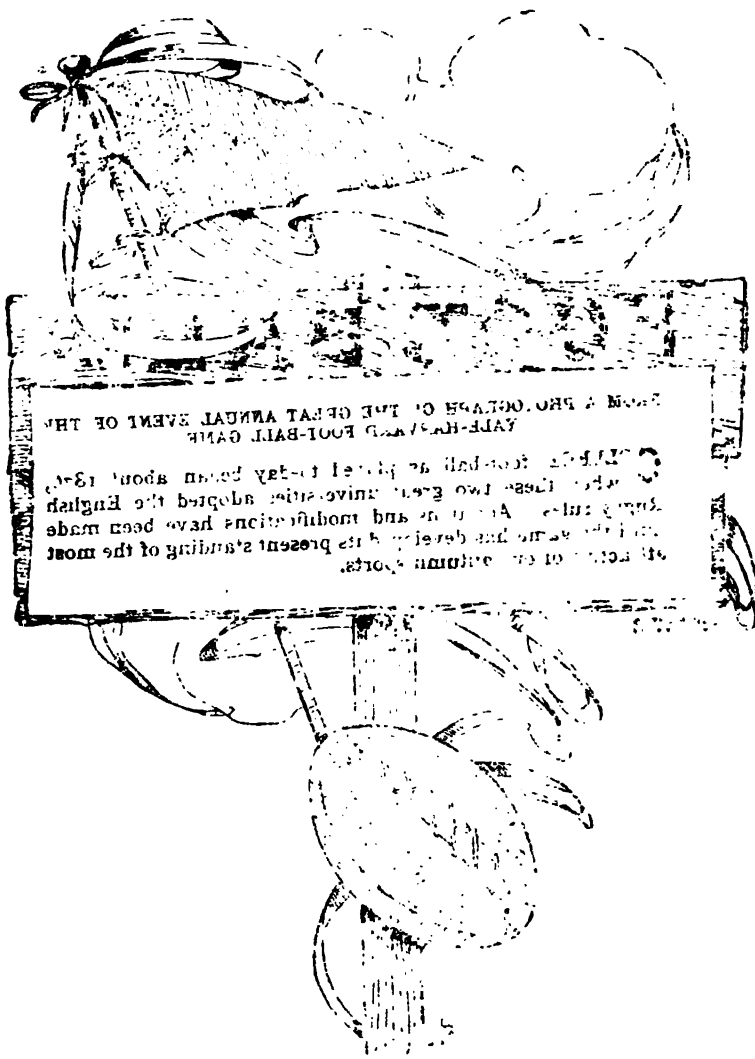




FROM A PHOTOGRAPH OF THE GREAT ANNUAL EVENT OF THE
YALE-HARVARD FOOT-BALL GAME

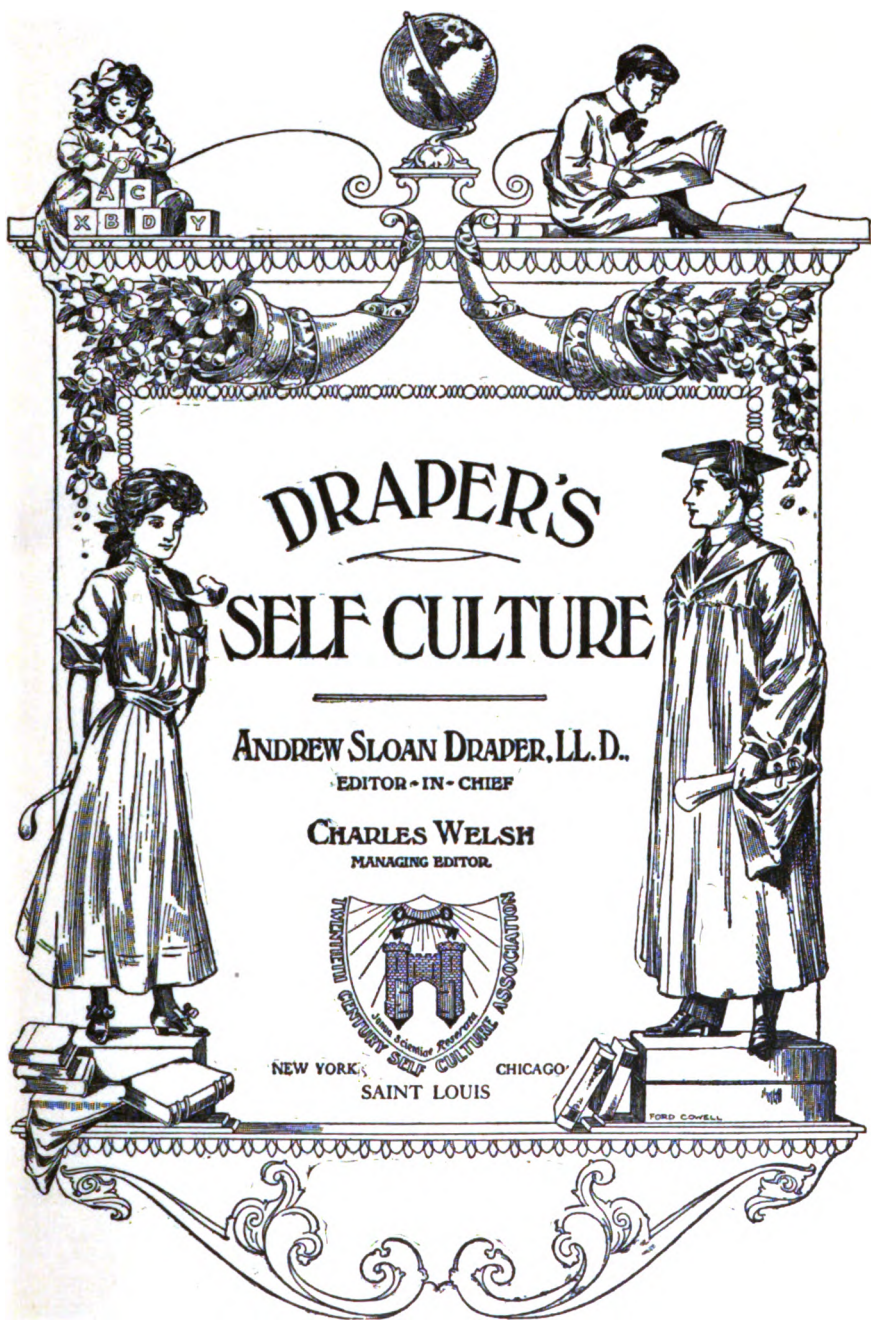
COLLEGE foot-ball as played to-day began about 1876,
when these two great universities adopted the English
Rugby rules. Additions and modifications have been made
until the game has developed its present standing of the most
attractive of our autumn sports.

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FROM A PHOTOGRAPH OF THE GREAT ANNUAL EVENT OF THE
LAFAYETTE AND FOOT-BALL GAME

On the 10th of July 1890, the first football game was played between the English and the Americans. The English were the victors. The game has since been made a part of the curriculum of the most famous universities in the world.



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**DRAPER'S
SELF CULTURE**

VOL. VI

**SPORTS, PASTIMES AND
PHYSICAL CULTURE.**

DRAPER'S SELF-CULTURE

ANDREW SLOAN DRAPER, LL.D.

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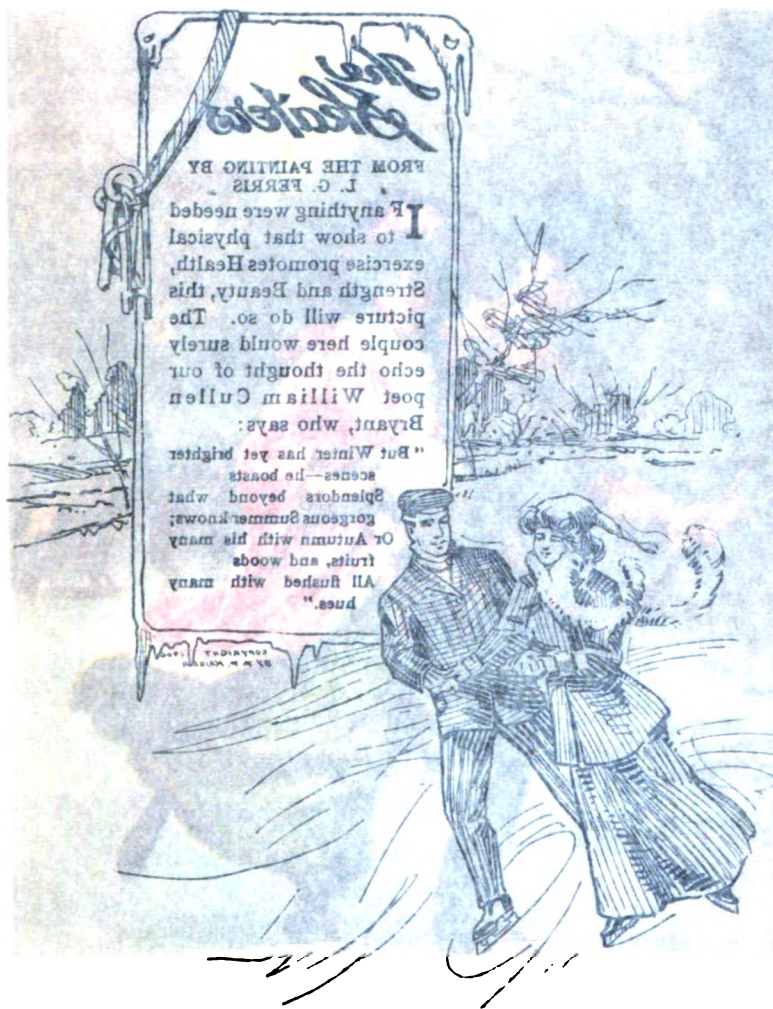
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The Skaters

FROM THE PAINTING BY
L. G. FERRIS

IF anything were needed to show that physical exercise promotes Health, Strength and Beauty, this picture will do so. The couple here would surely echo the thought of our poet William Cullen Bryant, who says:

"But Winter has yet brighter
scenes—he boasts
Splendors beyond what
gorgeous Summer knows;
Or Autumn with his many
fruits, and woods
All flushed with many
hues."

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INTRODUCTION

BY

WALTER CAMP.

"Not the quarry, but the chase,
Not the laurel, but the race,
Not the hazard, but the play
Make me, Lord, enjoy alway."

An American can hardly be persuaded he should not care which side wins—that the good all comes from not caring, and that the bad all comes from being unwilling to be beaten. But, is it not possible to bring into the hearts of a people whose energy is well-nigh irresistible, whose ambition is almost limitless, and who have not yet journeyed far from their militant age, a better appreciation and a saner regard for that side of sport which makes for the longer and pleasanter enjoyment? To one who has watched the progress of sport in this country for the last twenty-five years, it certainly seems that such an achievement is not only possible, but that it is already steadily on its way to accomplishment.

A gentleman always plays to win. He plays fairly, he takes no advantage, he is courteous, but he plays hard. He does not assume such an attitude that a victory over him is worthless. No one cares to win because the other fellow lets him. The spice of the game disappears if the other man does not try. The very discipline to the individual is doubtful if the contestants do not each struggle in his own way to prove superiority. And, furthermore, American athletes, the better part of them, could never be brought to that condition of mind in which they did not care which won, and those who could be brought to that state would be poor trash at best and not the ones who are later on to become the best men in our communities. But when any desire of victory so clouds the man's mind that he forgets fairness and courtesy in his sports, when he loses sight of the fact that a victory is absolutely barren if it be not fairly earned, then he is forfeiting his right to be enrolled among sportsmen and is injuring any sport he takes up.

When two gentlemen meet in any contest there is a tacit agreement between them that each shall do his best and the best one shall win, and anything that alters this condition, whether it be unfair play on the part of one or lukewarm interest on the part of the other, spoils the match. It is the same between teams or crews, or any athletic organizations. When a man is playing in an individual contest and does not represent his club or his university or anything of that kind

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he may have a right to more latitude in the matter than when he is representing others who have an interest in the contest, and particularly if he is a member of an organization where the others are dependent upon him for their own success. Under the latter conditions a man should not be guilty of breaking faith with his captain and his fellows either by failure to make proper preparation or by carelessness in the actual contest. His standard should be high enough to prevent his letting others suffer for his faults. If the rivalry becomes so intense that a man can forget fair play he ought not to enter the contest. He has even a graver responsibility than that already mentioned which should make him put himself in the best possible condition and do his best in the contest, for in this case he brings not perhaps the sting of defeat upon his fellows but a stigma far worse.

Then, too, there is another side to our big college contests, and that is the side of those who can only look on and aid by their sympathy. Have we gone beyond the expression of a fair sympathy? Is partisanship too extreme? At times undeniably it has become so. A gentleman should regard courtesy as one of the vital issues in these matters. Here we certainly have improved in the last few years. A good play by the opponents is appreciated and cheered by the rivals. It is no longer good form to cheer the errors of opponents. That is a step in advance and one that will be held. And after a victory; it is more than could be counted upon that the winners should entirely conceal their satisfaction over the victory, but it may be and is expected that they should not flaunt their victory in the faces of the defeated, but they should show that they are deserving of the victory by the way they bear themselves. It is supposed to be the part of a gentleman to be a good loser, and that means that he shall not detract from the victory of his opponents by excuses or complaints. When a man says fair play, fair field, and may the best win, he should stand to it.

In most contests there are officials agreed upon by both parties and having been thus agreed upon their decision should be accepted without a murmur.

"Who misses or who wins the prize
Go lose or conquer as you can;
And if you fall, or if you rise,
Be each, pray God, a gentleman,"

is the keynote of the whole thing.

If you or your side be inferior, it may not be as much fun for you as for the other fellow, but the mere fact of contending against odds and doing one's best is an inspiration and should be a pleasure.

The rules for any contest should be clearly understood. If a man cares to play the game he should care enough for it to learn the conditions under which he contests. It is not alone for his pleasure but it is his duty to know these rules so that there shall be no mis-

understanding between himself and his competitors. Disputes take all the good flavor out of the play. Whatever the game it has its rules, even though there be a great variation in the nature of these rules. The good old gentleman who heard that the pitcher deceived the batsman in baseball and was shocked by such a tone in sport, would hardly be recognized to-day, and yet the idea he had, though improperly implied, was right. It is not wrong for the pitcher to deceive the batsman by pitching a curved ball instead of a straight one, it is not wrong for a tennis player to look one way and then return the ball in another direction, it is not wrong in football for a portion of the team to run to one side of the line while the actual play goes to the other, and instances of this kind could be multiplied indefinitely. It is wrong for a player in baseball to intentionally block a man who is fielding the ball, it is wrong in football for a player to break a rule because the umpire cannot see him, it is wrong for the crowd in the grand stand, when a catcher is trying for a foul fly, to yell at him in an endeavor to make him muff it; and it is extreme partisanship and overvaluation of victory that has led to such occurrences. In that respect our sports have been deserving of the severest censure. But those who have followed the contests closely know very well that a great body of our young men are not guilty of such practices, that they neither indulge in them, nor do they countenance them, and that the trend of public sentiment is toward the abolition of every exhibition of unrestrained partisanship and the substitution for it of the fair-play spirit in its entirety.

To any one holding these views the desire must grow great to place before the youth of America such a volume as this. It is not to be wondered at that leading experts and exponents of the various games have gladly aided in the making of this collection of the principal sports of our country both in-doors and out, furnishing helpful hints and suggestions which make both these and the historical notes as well as the rules authoritative, and both the editors and publishers desire to return their thanks for this most valuable assistance.

In making this collection it is true that the majority of the games chosen are for young men and young women, but the little ones will find themselves not forgotten, while fathers and mothers, teachers and those who have the handling of youth will find many reminders of their old favorites and some novelties with which to amuse the younger generation committed to their care. We all know that it is not the set gymnasium task alone that furnishes the best type of physical culture and mental relaxation. It is the game that interests, the contest, the learning to do something better and better. Thus it is that the healthy mind and healthy body are best brought into proper relationship and equally developed by sports, pastimes, and physical education.

WALTER CAMP.

SCHOOL ATHLETICS.

BY

THEODORE ROOSEVELT.

I BELIEVE with all my heart in athletics, in sport, and have always done as much thereof as my limited capacity and my numerous duties would permit; but I believe in bodily vigor chiefly because I believe in the spirit that lies back of it. If a boy cannot go into athletics because he is not physically able to, that does not count in the least against him. He may be just as much of a man in after life as if he could, because it is not physical address but the moral quality behind it which really counts. But if he has the physical ability and keeps out because he is afraid, because he is lazy, because he is a mollycoddle, then I haven't any use for him. If he has not the right spirit, the spirit which makes him scorn self-indulgence, timidity, and mere ease, that is if he has not the spirit which normally stands at the base of physical hardihood, physical prowess, then that boy does not amount to much, and he is not ordinarily going to amount to much in after life. Of course, there are people with special abilities so great as to outweigh even defects like timidity and laziness, but the man who makes the Republic what it is, if he has not courage, the capacity to show prowess, the desire for hardihood, if he has not the scorn of mere ease, the scorn of pain, the scorn of discomfort (all of them qualities that go to make a man's worth on an eleven or a nine or an eight); if he has not something of that sort in him, then the lack is so great that it must be amply atoned for, more than amply atoned for, in other ways, or his usefulness to the community will be small.

So I believe heartily in physical prowess, in the sports that go to make physical prowess. I believe in them not only because of the amusement and pleasure they bring, but because I think they are useful. Yet I think you had a great deal better never go into them than to go into them with the idea that they are the chief end even of school or college; still more of life. There was an article in one of the *Atlantic Monthly's* which all parents should read, by Lawrence Lowell, on the careers in after life of those who have distinguished themselves as scholars and as athletes in college; and the showing for the athletes was not as good, either, as I had hoped or as I had expected that it would have been. I believe that to have been in athletics is an advantage to a man only if he realizes that even when

From an address at the Prize Day Exercises at Groton School.

he is in college it is not his chief end, and if he realizes that once out of college it cannot be his end at all. It is a mighty good thing to be a halfback on a varsity eleven; but it is a mighty poor thing, when a man reaches the age of forty, only to be able to say that he was once halfback on an eleven. Do not lose the sense of proportion.

Remember that in life, and above all in the very active, practical, workaday life on this continent, the man who wins out must be the man who works. He cannot play all the time. He cannot have play as his principal occupation and win out. Let him play; let him have as good a time as he can have. I have a pity that is akin to contempt for the man who does not have as good a time as he can out of life. But let him work. Let him count in the world. When he comes to the end of his life let him feel he has pulled his weight and a little more. A sound body is good; a sound mind is better; but a strong and clean character is better than either.

SPORTS, PASTIMES, AND PHYSICAL TRAINING.

BY

J. W. PAGE, DIRECTOR DEPARTMENT OF PHYSICAL CULTURE, OHIO
WESLEYAN UNIVERSITY.

THE day is long past since people in general have come to realize the absolute need of physical exercise in order that one may attain the full vigor of manhood. Especially is it the general agreement among students of the race, that each individual, in coming to adult life, must pass through stages of development, corresponding to the gradual development of the race from its earliest form. This view of human growth puts emphasis upon physical training, for it has been through physical struggle of various kinds that the body, and even the mind, have come to their present structure and functions. The cultivation of the body is, then, a necessary antecedent which must accompany, and be basal to, a full development of mind and character. The French philosopher Guyau has reference to this when he says "Sedentary habits are the greatest enemies of the body; the greatest enemy of the mind is inattention. The weaker the body is, the more it commands: the stronger it is, the more it obeys."

Among animals, this training of the body is carried on unconsciously by means of the various sports and plays of each species; but it is not so with the human animal. With the advancement of civilized life, the young generations are being sent to school earlier and kept in school longer, with the result that the natural activity of child life is being materially lessened. We are finding with alarm-

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ing rapidity that individuals come to adult life lacking that vigor and bodily control which is every one's right.

And so the solution of the problem came. Gymnasias are springing up all over the country. College, club, or church is incomplete without its physical adjunct. The prospect for the century is brighter, but still the value of training for and by games and gymnastics has not impressed itself upon the great majority. Our national education upon the subject of health training and athletics is haphazard, to say the least. We all should know how necessary a certain amount of systematic exercise is, in order that the mind may be kept clean, the moral tone high, and that this great machine called the human body may be well oiled and in good working order continually.

"The wise for cure on exercise depend.
Better to hunt in fields for health unbought
Than fee the doctor for a nauseous draught."

So says Dryden, and Henry Ward Beecher adds, "There are many troubles which you cannot cure by the Bible and the hymn-book, but which you can cure by a good perspiration and a breath of fresh air." Then think over this statement by Dr. Rush, an eminent medical authority:

"Inactivity and supineness have undermined more constitutions than were ever destroyed by excessive labors. Exercise, so far from prejudicing and alienating, strengthens and consolidates the body."

Just now the country is overrun with football. Somewhat too rough it may be, but Oh! the exhilarating effects of a good football game! How strong and healthy one feels throughout the entire season, and through the year as a result of the season. So it is, too, with baseball, hockey, basketball, and all of those games which require strength and endurance, and whose very nature is vigorous activity. In these games, lessons are being learned every day, better than they could be taught in any classroom—I say better, because one learns by example and illustration much more quickly than by precept and exhortation—lessons about the great principles of mutual dependence, co-operation, division of labor, of independent self-activity combined with obedience to certain written laws and to a stricter but unwritten code of honor. And they are a wonderful means of social intercourse as well as social and national unity. Does it not pay to absorb these truths and take them into our very beings? What are a few bruises now and then in comparison?

And yet there are not a few even in our own generation who will object to games and sports on the ground that the boy could spend the time so much more advantageously in other ways. True, we don't want him to play all the time, nor would you have him work all the time. But when he has leisure, let him engage in some vigorous pastime which will bring out his whole nature and tend to make him the all-round man, the ideal of every healthy boy. But do not mistake me. I do not claim that these games will provide every-

thing a boy needs in the line of exercise. There is not a physical director in the country who does not believe in the intrinsic value of sports and games as a pastime. Yet every one of them will add that as the boy grows older, these games must be coupled with some systematic physical exercise to bring out the best there is in him. At a recent national convention of the A. A. A. P. E. the following resolutions were discussed and voted:

"Whereas, we believe that two serious obstacles to the advancement of Physical Education in the United States are:

"(1) The disproportionate promotion of athletic sports precluding devotion of the requisite time and attention to thorough and symmetrical physical development; and

"(2) The too frequent failure of school and college authorities to recognize and encourage such systematic gymnastic training: Therefore, be it

"Resolved, That to this end the Physical Director should have control of both gymnastics and athletics in schools and colleges."

Thomas Wentworth Higginson, in his "Outdoor Papers," says, "We must not ignore the play-impulse in human nature, which, according to Schiller, is the foundation of all art. Meet Nature on the cricket ground or at the regatta; swim with her, ride with her, run with her, and she gladly takes you back once more within the horizon of her magic, and your heart of manhood is born again into more than the fresh happiness of the boy."

But with all this we must remember that the play-life is one small department of our physical nature, and in order to approach our ideal perfect man we insist that systematic physical training must be first and foremost in our minds always.

THE GENTLEMAN IN HIS SPORTS.

BY

EDWARD MILTON FAIRCHILD, LECTURER FOR MORAL EDUCATION BOARD.

THE rules of a game set the limits of fair play. It is agreed by all concerned to test strength and skill within these rules. If a man makes a home run without touching all four bases, he is declared out and his team given no credit on the score. This is the ruling whether he skips a base on purpose or by mistake.

In addition to these playing rules there are accepted among sportsmen some general laws of conduct, which are matters of tradition, and apply to all sport. During the thousands of years that men have had their sports there has grown up an ideal of conduct, which has

NOTE.—The Eight Great Laws of Sport were formulated for the Moral Education Board Lectures and are copyrighted by Mr. E. M. Fairchild.

strong backing in the sentiments of sportsmen. It is wise for a boy to discover these unwritten laws, else he is in danger of appearing green, and being discredited for conduct unbecoming to sportsmen. If a boy has skill, all acknowledge him an athlete: but if he will not be a sportsman in his games, true sportsmen do not like him, nor take interest in his success. Sometimes they condemn him scathingly.

Athletes are divided into two great groups,—professionals and amateurs. Professionals earn their living by exhibition of their strength and skill. They are in position to give their whole attention and energy to training, and can outclass the amateurs. Amateurs are those who enter games because they love the sport, but having something else that is their business, the money earning thing they do, they can give only leisure time to training.

Let us consider a famous college pitcher at his practice. His college studies are supposed to be his main concern, since they are to prepare him for his life's career. Even before graduation he became professional by signing as a pitcher on salary in a national team. This made his pitching his chief concern, and terminated his career as an amateur. He could no longer take his sport for the love of sport, and keep it something unrelated to his work in life. It was no longer fair that he should pitch for amateurs. In becoming a professional he did not lose his standing as a gentleman and sportsman, but as an athlete he raised himself to a higher class than amateurs.

The laws of sportsmanship are chiefly the concern of amateurs, because they are necessary to make sport universally enjoyable. A single boor among contestants may rob the rest of all their pleasure in the game. They prescribe the personal treatment a man may expect from his opponents. Underneath them are those more general laws governing the conduct of a gentleman. If you are not trying for standing as a gentleman, you can hardly expect to be considered sportsmanlike.

But there are also special laws that govern the conduct of a gentleman while taking part in sports, and these you need to know.

The first great law is this,—“Follow sport for sport's sake.” This means that the win is not the whole of sport. Both the victors and the vanquished are to have the pleasure of a contest. To care too much about the win is very bad form, and impolite. Win if you can, but throughout the game, play for the fun there is in the contest as a whole. A boy who bubbles over with joy when he is winning, and looks sour, half mad, and disheartened when he loses is not yet by any means a sportsman.

Sport for sport's sake means also that you keep within your time for exercise, and play within your strength. A pupil's studies and a lawyer's work must not be interfered with by overtraining and exertion for a game. This would be overdoing sport.

Law 2. “Play the game within the rules, and win or lose with

honor." The true sportsman has a fine sense of honor. The rules are the terms of his agreement with his opponent, and he keeps them by his own choice. He does not care enough about the win to be willing to win by fraud. Nor does he care to play with one who enjoys winning by foul play. When entered in a game with such an one, he plays it through, keeping himself restrained within the laws of sportsmanship. He does not stop to make a scene. Others beside himself can see the fouls and fraud. If he loses the win, he keeps his reputation for skill and sportsmanship, while his opponent has nothing on which to base his brag,—not even self-respect. The true sportsman plays his game with shrewdness, takes every fair advantage, but makes it a matter of personal honor to keep this law of sport.

Law 3. "Be courteous and friendly in your sport." This is a law most boys will find it hard to keep. Take such a case as this: The boys are tossing up the bat for choice of innings in baseball. One claims his hand is last, the other that he can crowd his hand again on top. Here they stand and wrangle. Many a time they end in blows and the disgusting spectacle of a fight. Learn to keep your temper no matter what may happen in a game. A protest can be made with courtesy, and arguments as to what is and what is not within the rules can go on without a show of anger. The one who talks the loudest is not always right, indeed he is likely to be wrong. The one who knows his rules can keep his self-control, and quote them in a courteous manner, or show them in the book.

Before the game is on, and later in all discussion of its points, your treatment of your opponents must be courteous and friendly. If they have not your respect and friendship, it is hardly worth your while to play a game at all.

Law. 4. "A sportsman must have courage, a coward is not worthy of the name." In every game there are dangers sometimes serious as in polo, sometimes trifling. The sportsman plays with caution, but he accepts the dangers of the game, and plays it with full courage. The rules are drawn to reduce these dangers within reason, and revised when this is not at first accomplished. Within these rules the game of sportsmen is as hard as they can make it. A sportsman asks no namby-pamby play from his opponent. He intends to earn his laurels, and his courage strengthens in a losing game. It is part of the discipline of sport to keep your nerve. When fear enters the heart of an athlete, his muscles lose their strength. You can see how fear unnerves a boy when he holds his hands to catch his ball, but is afraid lest it sting and pound too hard. He must outgrow fear, and get his nerve, to be a sportsman.

Law 5. "The umpire shall decide the play." An umpire to be satisfactory must be both intelligent and just. Usually in a close decision the umpire is correct against the judgment of any player or any spectator in the crowd. He is close at hand to see. On the whole it is the proper thing to doubt your adverse judgment, and to accept

the umpire's as correct, playing the game without dispute. You can properly call in question some misinterpretation of the rules, and argue on that kind of difference of opinion: but the umpire is sole judge of such a fact as whether a man is out at first or not, and a sportsman does not argue on a point like that.

To make a charge of unfair umpiring merely as an excuse for a losing game is most unsportsmanlike.

When an umpire is manifestly unfair or unreliable, unless your opponents also think this and desire a change, there is nothing left for you to do but to play the game as sportsmen. A partisan umpire is a disgrace to those he favors. Others beside the players can see the fact of his unfairness, and those who win by reason of it have no honor from their game. Before the game, both sides should agree on one as umpire in whom they have perfect confidence. When once the game is on, then play it through on his decisions. These wrangles with the umpire are most unsportsmanlike. The umpire shall decide the play.

Law 6. "Honor for the victors, but no derision for the vanquished."

No sportsman wishes to detract from the joys of victory. Let the thrill of victory go through and through you, but remember to bear your honors like a gentleman, and have consideration for those disappointed by defeat. If your victory is worthy of rejoicing, your opponents were worthy as contestants, and are deserving of continued courtesy. Have your celebration on your home grounds after the vanquished have withdrawn, and if you win on their field, wait until you are out of town before you explode in honor of yourselves. If they win on your field, congratulate them on their game, and see them off with honor and good feeling. This is the fellowship of sportsmen.

Law 7. "The true sportsman is a good loser in his games." Since games are all for sport, one does not wish to make an enemy by winning in a game, and yet each side must play to win, else the game is childish in the extreme. You must not let defeat upset your feeling of personal good will toward your opponents. When you entered on the game, you took the chances of your defeat; now accept the outcome as a sportsman should. Hide your disappointment, and congratulate the men who win. To withhold the honors that belong to them is dishonorable. You must not do that sort of thing. A vanquished sportsman admires the superior skill of his opponents, and loses in a sportsman's way.

Law 8. "True sportsmen may have pride in their success, but not conceit."

A quiet, modest pride in one's success, a consciousness of the rights that honors fairly won bestow on him who wins them, this is entirely proper and reasonable. But conceit and brag are quite intolerable. They show a head that is weak in right good sense, in contrast with one's ability as an athlete. And after all it is brains and heart the

sportsman is made of. His muscles are but the machine he uses, which must not seem to him too seriously important outside the field of sport.

Be an amateur in sport, and keep alive thereby in every fibre of your body, from boyhood to manhood and old age. Your health and spirits will profit by the exercise. And keep the eight great laws of sport.

NOTE.—The thanks of the Editors and Publishers are especially due to Mr. J. E. Sullivan, the President of The Amateur Athletic Union and of The American Sports Publishing Co., who has kindly allowed them to use the authorized rules, terms employed, and descriptions of the various Sports and Games which are contained in the excellent and well-known "Athletic Library" published by them.

SPORTS, PASTIMES, AND PHYSICAL TRAINING.

SPORTS AND PASTIMES.

ARCHERY.

BY

LOUIS W. MAXSON, N. A. A. CHAMPION, 1889-1898.

AS a healthful recreation for both sexes archery is unexcelled by any other sport. Frequent practice in the open air, and the application of needed strength and skill invigorate both body and mind. Simple as it seems to the inexperienced observer, no game requires a closer application of every mental and physical quality of the player, if he desires to excel.

As interest in a pastime depends largely on the skill one attains, the archer should be careful in all things. The American championship has on several occasions been won by a single arrow. Many little details conduce to good form in archery. These, through constant care in practice, become intuitive, while strengthened muscles, quickened intellect, and sharpened vision lend their aid to perfect marksmanship.

Let no ambitious archer injure himself by overstraining his muscles, for what he gains in power he more than loses in accuracy of aim and sharpness of loose. Let him begin with a bow well within his strength, seeking accuracy through much practice. Exercise will so invigorate his muscles that the strength of the drawing arm will soon accommodate itself to a stronger weapon.

Enjoyment of any pastime depends on pleasant companionship, environment, and good-natured rivalry. These one finds in archery as in few other forms of recreation. The grassy range, pure air, and sunshine invigorate, while the adaptability of the game to all ages permits the participation of family and friends on a common footing.

As a provider of food in peace and a deadly weapon in war, the bow antedates historical times. History and tradition are full of its romance, a story of surpassing interest, of love and hate, of peace and war, out of all of which has been evolved this most enjoyable recreation.

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Much of his success depends upon the archer's equipment. The bow should be made from some springy wood, straight of grain, clear in color, and free from frets or other defects. The upper limb should be the longer and the bow when strung should bend more abruptly near the ends of its limbs, being nearly rigid at the middle. A good lance or lemonwood weapon will give best satisfaction to a young archer, but there is a sweetness in the draw of a good self yew that endears it to an expert bowman. A self-bow, one made from a single piece of wood, is better and cheaper for a novice than a backed bow, which is made by gluing strips of wood upon each other.

Arrows for a lady or youth should be twenty-five inches long, those for a man being twenty-eight in length. Footed shafts, those tipped with a denser wood at the forward end, are preferable to unfooted arrows, which easily break when they strike a solid body.

A leather bracer or guard should be used upon the arm, which holds the bow, to prevent injury by blows of the string. Tips or stalls should also be worn upon the fingers to save them from becoming bruised.

And now a few words as to how to use these weapons. In stringing a bow, place the lower end in the hollow of the right foot, holding the bow by its handle with the right hand close to the body. With the fingers of the left hand press hard upon the back of the upper limb of the weapon, just below the loop of the string, pressing the latter upwards as the bow yields till it drops into the notch in the upper horn.

Having strung the bow, hold it horizontally with the left hand at the handle, lay the arrow across it with the cock feather, the one at right angles to the nock in the arrow, uppermost, and nock the arrow on the string. Catching the string with the outer joint of the first three fingers, with the arrow resting between the first and second, draw the bow. In doing this push the left hand forward, drawing back the right to a point just to the right of the chin, thus bringing the arrow to a line beneath the eye. Catch a definite aim at some object which will serve as a sight-point and loose the string by straightening the fingers while drawing the hand sharply backward. Be sure to hold the bow hand up till the arrow has fully left the bow, and always draw to the same distance.

The rounds shot by the National Archery Association of the United States are as follows:

York Round: 72 arrows at 100 yards; 48 arrows at 80 yards; 24 arrows at 60 yards.

American Round: 30 arrows each at 60, 50, and 40 yards.

Potomac or Team Round: 96 arrows at 60 yards.

The ladies shoot as follows:

National Round: 48 arrows at 60 yards; 24 arrows at 50 yards.

Columbia Round: 24 arrows each at 50, 40, and 30 yards.

The ladies' team contests are shot with 96 arrows at 50 yards.



FOOTBALL, CRICKET, ARCHERY, LACROSSE

1. Football. Penn's ball on her own 30-yard line.
2. Cricket. Bowled by Barnes.
3. Louis W. Maxson. (N. A. A. Champion 1889-1898.)
4. Football—The line up, showing the neutral zone required by the new rules. The men's bodies must be clear of the ball except the snapper back.
5. Lacrosse.

Hits as well as score are counted, and in deciding the winner in a match hits and score at each distance count 1 each, gross hits and score at all distances counting 2. Where two archers have the same number of points the one having the highest gross score wins.

Every arrow passing through or rebounding from the target shall be scored, one hit, one point, and no arrow should be withdrawn from the target till its value has been entered on the score card.

If the archers tire of target shooting let them try rovers or shooting at chance marks at different distances, the one coming nearest the mark selecting that next to be shot at.

In turtle-back shooting the arrow is shot high in the air, preferably over a tree or some other intervening object, at a target prone upon the ground. The arrow falling nearest the centre of the target scores.

In flight shooting the archer seeks to cast his arrow the greatest possible distance.

As archery is a deliberate game of precision it cultivates an even disposition; hence, be ever courteous and fair, doing nothing to distract your fellow-archer's attention while in the act of shooting.

RULES FOR ARCHERY MEETINGS.

Where a large number compete, several targets are used, and the contestants are divided into parties, each of which uses the same target throughout the match.

1. The Field Captain shall have entire control of the ranges, targets and order of shooting, and shall appoint a Target Captain for each target, who shall direct the order of shooting at his target.

2. Each Target Captain shall appoint a Scorer and a Herald to act at his target. The Scorer shall keep a record of each arrow shot, upon blanks provided for the purpose by the association. The Herald shall announce the result of each shot.

3. An arrow must remain in the target until the value of the "hit" is recorded, otherwise the "hit" shall not be counted.

4. The targets shall be four feet in diameter, and placed on easels, the centre of the "gold" being four feet from the ground.

5. The "gold" shall be $9\frac{1}{8}$ in. in diameter, and each ring shall be $4\frac{1}{8}$ inches in width.

6. The value of colors shall be: Gold, 9; red, 7; blue, 5; black, 3; white, 1.

7. In case an arrow cuts two colors, it shall count as having hit the inner one.

8. All disputes shall be referred for decision to the Captain of the target where they arise.

9. Every archer shall shoot with arrows bearing his mark, and every arrow leaving the bow shall be deemed as having been shot, unless the archer can reach it with his bow while standing inside the line from which he is shooting.

10. No person, unless competing for prizes, shall be allowed within the bounds of the Archers' grounds during the progress of the shooting.

SCORING.

Each one shooting his three arrows gives place to the next till all have shot six. The entire line of archers then advances to the far end of the range, where the target captain draws the shafts of each contestant, seeing that the scorer had correctly credited the same before so doing.

The scorer should be careful to cancel all spaces in the tally sheet, thus preventing any question as to the validity of the score arising, and should always foot his scores and prove them for both distances and rounds before handing his score sheet to the secretary of the meeting.

Both hits and score are counted in determining the winner in most matches, one point each being given for most hits and highest score at each distance and two points each for the greatest number of hits and the highest total score at all distances. The archer getting the greatest number of these points wins.

In case of a tie in points the match is given to the one having greatest total score.

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In case of a tie in points and score the match is given to the one having greatest total hits.

In team contests the match is decided on gross score.

NOTE—Archery is growing in favor in schools and colleges as a form of physical training. At Wellesley College it has just become an organized sport of the athletic association. [C. W.]

BALLOONING.

BY

ROY KNABENSHUE, DESIGNER AND CONSTRUCTOR OF BALLOONS, AIR-SHIPS, AND FLYING-MACHINES.

ONE naturally associates this term with the ordinary parachute exhibition that can be seen at the small county fairs. How little the public in general know of the joys of calmly gliding along several thousand feet, part the time below and part the time above those beautiful fleecy clouds with which the sky is lined during the month of August.

To speak of a balloon ascension is to suggest a common exhibition, but the balloon is one of the most scientific toys with which man can amuse himself. During the Paris exhibition over 400 balloons were liberated, carrying as many as 800 passengers and not one person received a scratch or a bump of sufficient importance to cause him to remember any unpleasant feature connected with his ride; and each year since the Paris Exposition, there have been liberated from different portions of France as many as 400 balloons during the summer months, and as yet the records show no accident of any kind; neither have we heard of any unpleasant feature in connection with these ascents.

For the past twenty years there has been exhibited in the various parts of the United States at county fairs and parks, what is known as the Montgolfier or Hot Air Balloon in which the aéronaut would make an ascent of an altitude of perhaps 2000 feet, and make his descent in a parachute. When these exhibitions were first given, they proved great drawing cards and were constantly in demand. This demand proved so great, and the financial part so alluring, that in a very short time they became quite common.

Each aéronaut strove to keep himself busy and in order to do so was quite willing to cut his price. This could result in but one thing, that into the business drifted a class of men that the better sort of people did not care to associate with, so at the present time very little is thought of a man who makes ballooning his profession.

The day for making balloon ascensions as an attraction has passed and there is only one thing left for the balloon and that is its use as a sport. The spherical balloon inflated with gas, equipped with all the modern appliances and in which the aéronaut and passengers ride in a

wicker basket can be controlled with a greater degree of safety to its occupants than can the modern automobile when touring through the country. This statement is hard to credit, but nevertheless it is true; a comparison of the automobile and balloon accidents will prove this to be a fact.

The European countries, especially France, have always led the world in sporting events and this is especially true in automobiling and ballooning. The very best classes in France and even the nobility own their touring balloons much the same as they own their touring automobiles, and associations have been formed for the purpose of promoting this sport.

Germany and England as well as Spain have followed closely the footsteps of France, and they have given from time to time, balloon parties and international balloon races in which the best people participate, and many thousands of miles are covered.

The longest distance travelled, as a matter of record, was from Paris to Korostichev, Russia, a distance of 1153 miles; the balloon was liberated at 5.30 o'clock P. M., and after travelling 35¾ hours, a landing was made.

On this trip every kind of weather conditions that one could imagine was met with, part of the time in sunshine, then above the clouds, now absolute calm and quiet, then again carried along just above a terrific thunder storm out of reach of danger of the lightning which flashed in a zigzag fashion across the black cloud beneath, and finally when the landing was made there was hardly a breath of air to disturb the leaves on the trees.

This country has two Aëro Clubs, one located in New York, the Aëro Club of America, and the other the Aëro Club of Philadelphia. Very little public interest so far has been taken in these clubs. A number of balloon ascensions have been made during which our American brothers have enjoyed the sensations of a ride thousands of feet in the air, but the fact that we have read of so many deaths through the use of the parachute keeps most of our people from entertaining any thoughts of ever taking a balloon ride; and yet the sensation of drifting along through unlimited space, free from the cares of the world below, simply beggars description.

The beauty and grandeur of the scenery spread out beneath will forever live in the minds of those who are fortunate enough to be able to take a trip of this nature.

Imagine, if you can, an ascent from Central Park in New York City. At an elevation of 8000 feet, we are directly over the park. Long Island is laid out much the same as we would see it in a picture map; the ocean extends for miles and miles and finally rises and meets the sky on a level with the eye and as we view the horizon on all sides, we find this condition is the same; then we allow our glance to follow down directly underneath us, and the impression we gain is that the earth is not round or flat, but is shaped somewhat

like the hollow of a bowl. Somewhat startled at this condition we look again; we appreciate the fact that the earth is round, but at the same time this is a condition that seems to exist when viewed from a balloon.

Fifty miles at sea there appears a dot with a cloud of smoke hanging over it; on looking through powerful glasses we are able to see that this is one of our large ocean liners. Off on Long Island we see a pair of steel rails glistening in the sunlight; we hear the roar of the train and we see the steam appear in short puffs, and we wait for the sound of the whistle.

Slowly we drift across the Hudson River, a stream which seems to run as straight as a line drawn on a piece of paper, until it disappears from view at the horizon, and as we slowly pass over the marshes in Jersey, they have the appearance of a well-kept lawn and look very beautiful; one hardly gets the same impression in passing through the marshes on the train!

We now turn our attention to the balloon, and we feel that we would like to explore the higher regions, and therefore throw overboard two or three handfuls of sand which we carry for ballast.

No movement is perceptible, yet our balloon gradually rises higher and higher until we gain an altitude of 12,000 feet. Here we meet a current which changes our direction and in place of going west we turn northwest. Apparently we are hardly moving, but New York has faded away in the distance and we are over green fields with waving corn, which we see through the glasses. Apparently the wind is blowing far below, yet we feel no breeze and the sun is burning us.

At the time we started from the grounds, the temperature was 78 degrees; we look at the thermometer, we are surprised to find it is 72, yet it seems very much warmer up here than it did on the ground below, and we are perspiring.

The balloon has begun to descend, and as we approach the earth we encounter another breeze and are carried along for some distance. Apparently, without our being able to comprehend how it happens, we notice that we are enveloped in a cloud. There are so many things to keep in one's mind and take the attention that these little things sometimes cause surprise, yet we have nothing to do but to observe, but as we get into this cloud we are unable to see anything.

We look up and can see the bottom of the balloon which appears through the mist, and on looking down, we see nothing but a fog. We are descending, and of a sudden the earth appears through the mist and in another instant we are beneath the cloud. The first time one passes through a cloud it creates a weird feeling, but immediately when out, either under it or above it, this feeling dies away, and the beauty of the scenery beneath you fills your soul.

We find now, that we have drifted into a hilly country; small patches here and there are cultivated fields while the dark green spots

are forests. We cannot notice the hills except for the shadow they cast over the ground.

Apparently we are approaching the ground very rapidly. In order to avoid coming down in that large clump of trees, we dispose of a half sack of our sand; this checks the descent of the balloon. At the same time we are travelling very rapidly in a westerly direction, and we pass over many beautiful farms which appear to be ideal homes situated in a beautiful green country with hills on every side, and apparently asphalt pavements which extend for miles; these are the macadam roads. A river, which we fail to recognize, runs almost within a stone's throw from one of these houses. Our balloon for some unaccountable reason has taken a fancy to this river and it follows it for a number of miles, even though the river takes a turn a little to the right; then suddenly, apparently without any cause, the balloon seem to rise again, and we leave the river and this beautiful territory and ascend again into cloud land. We are in the clouds but a moment; first the peak of the balloon rises above them, then the car, and after rubbing our eyes for a moment, we observe that the sun has cast a shadow of the balloon and car upon the clouds, and for a moment even the cordage is plainly seen, this whole picture is surrounded by an immense halo resembling our rainbow in colors, but as we rise higher the balloon seems to get out of focus and this picture is lost to view.

We sail along apparently at no speed at all, just merely lazily hanging above the clouds, going neither here nor there. Then we speculate as to where we are, we are unable to see the ground, as blankets of clouds seem to have folded in beneath us and nowhere is the earth visible. How beautiful are the clouds! they appear like immense bunches of white cotton.

As the eye sweeps over this view, one would gain the impression that it is so much water except for the blinding whiteness.

After a period of what seems to be hours, we notice that the clouds appear to be ascending; and as they approach, envelop, and pass above us we realize that they are standing still and we are descending. When a balloon is in motion the occupants of the car have no feeling, the start is so gradual. So it was in this case, the clouds apparently came up and met us and we passed through and left them above us without having felt any motion, yet if one were to lean over the edge of the car and hold one's face towards the ground, one would be able to feel the faint breeze, but the mind is so occupied with other things that one does not think of this, unless he has made several ascensions. We notice now that it is beginning to get dark, and the gas in our balloon has condensed to such an extent that it has lost the beauty of its round form, and we also notice that our ballast is very nearly exhausted. There are no landmarks beneath us to indicate where we are, yet we are approaching a town of considerable size. We decide that we have travelled far enough and we

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had better think of landing. The balloon steadily descends, and when within 1000 feet of the ground we are almost over the city: in order to avoid coming down in the streets we throw out our last remaining handful of sand. The balloon steadily drifts along until we have passed the outskirts of this town and we note that our trail line, which hangs 350 feet below our balloon, is touching the tops of the trees of a forest of about 40 acres.

We have no fear of coming down into these trees as we know the balloon will cease descending as soon as a certain amount of the weight of this rope is taken up on the tops of the trees, and as we reach the edge of the forest, we are within 50 feet of the top of the trees. A green meadow lies just beneath us, a beautiful place in which to land.

We therefore open the valve in the top of our balloon and allow a quantity of the gas to escape and we settle gently down into this meadow.

We thought we were alone, but apparently from out of the ground appear several hundred boys, and inside of five minutes are several thousand persons around our car, eager to grasp our hands and lend any assistance necessary. Our trip is over, and we find that we have travelled a distance of 300 miles and have landed at Binghamton, N. Y.

By holding the valve open, we allow the gas in the balloon to escape and it gradually loses its form, until it lies in a heap on the ground. Then carefully disengaging the net and ropes, we fold the balloon into as small a bundle as possible and wrap it in a cloth we carry for the purpose, and carefully place it in the basket in which we have made this trip.

The entire balloon, net, ropes, anchors, all, can be snugly packed in this basket, making but the one bundle.

A farmer's wagon is at hand, and we lift the basket with its contents into the wagon and cart it to the railroad station and check it through to New York, the point from which we started.

Of course, the usual reporter is at hand and he must know all the details; we are not even allowed to wash our hands until he gets his story, and there are thousands of persons eager to hear every detail of the trip and they all express a desire to ride in the balloon, but that is where it ends: they see the balloon fly through the air, they shake the hands of the people who were in it, they admire their nerve, and they want to take a ride, yet the average American is too busy to give his time to any such sport and the matter is forgotten; but there is absolutely no sport on the face of the earth to-day that is so full of keen pleasure and thorough enjoyment as ballooning.

The chief charm in a balloon ascension is the uncertainty as to where you are going, or where you are coming down. The dangers of ballooning can be confined to two things: the use of poor judgment and the landing.

Of course, it is necessary in making a balloon ascension, to thoroughly understand what to do under all conditions, and if one were to use poor judgment a beautiful trip might end disastrously, and there really need be no danger in landing if one is careful to select the proper place in which to come down.

This may be done by the use of the valve line and the ballast.

If the balloon is steadily descending and will come down in a body of water, two or three handfuls of sand will generally check the descent and the balloon will stay at the same altitude until you see a more suitable place in which to bring it down.

This is done by a pull on the valve line which runs through the centre of the balloon.

BALLOONING AS A SPORT.

BY

A. W. ROLKER.

THIS is the latest sport wherein the American of wealth and daring now gratifies his craving for new sensations.

However dangerous or otherwise, not since the automobile took hold in this country has a sport spread so rapidly as ballooning. In 1905 the Aëro Club of America was organized, and in February, 1906, at West Point, the club had its first ascension; yet during that brief time many men prominent in finance, in science and invention, and in sport have joined the club, whose purpose it is to advance the developments of aëronautics, to encourage aërial navigation and to organize excursions, races, and expositions, and to maintain club headquarters and aërodromes provided with gas generators and other equipments necessary to ballooning and air-ship navigation. Among those who were the first to own balloons, who have placed orders for balloons with American or foreign makers, or who are otherwise interested in the new sport are such men as William K. Vanderbilt, Jr.; Col. John Jacob Astor, Cortlandt F. Bishop, Harry Payne Whitney, O. H. P. Belmont, Professor M. I. Pupin, Dr. Alexander Graham Bell, Colgate Hoyt, Hiram S. Maxim, Pierre Lorillard Ronalds, Augustus Post, Charles J. Glidden, Edward C. Boyce, Professor David Todd, Joseph Hoadley, Captain Homer W. Hedge, Joseph Leiter, A. N. Chanler, Major C. S. Miller, Leo Stevens, Dr. Julian P. Thomas, J. C. McCoy, and many others. In all, about 300 members, men of wealth and position, men scattered throughout the States as far west as Portland, Ore., have joined this club, which owns its own portable hydrogen gas generators, which is keeping accurate record of all flights made, and which at this writing is making preparations for the first balloon race, to be held at a suitable location.

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Whatever the choice of the individual, the most favored balloons for sporting purposes in this country are made of cotton, and in size are a happy medium between the all-powerful and cumbersome and the little one-man balloon suitable for a comparatively brief ascension. Either ordinary illuminating gas or hydrogen, which is twice as strong although seven times as expensive as coal gas, is used for inflation. The diameter of these balloons varies between 20 and 50 feet, the volume of gas capacity between 10,000 and 70,000 cubic feet, and the passenger capacity between one and seven persons aside from the necessary luggage, instruments, and ballast. The cost of balloons varies, of course, according to their size. You can buy a one-man cotton balloon that will hold \$25 or \$30 worth of gas and will lift you to a height of 10,000 feet or keep you afloat between ten and twenty-four hours at a height of 2000 feet, for something like \$400. But rarely is the one-man balloon in favor. A two- or three-man balloon measuring 44 feet in diameter, containing 18,000 cubic feet of hydrogen and capable of lifting three passengers, a 400-pound car, and 250 pounds of ballast, you can buy for about \$600. And a five-man balloon made of cotton, measuring 50 feet in diameter, containing 70,000 cubic feet of gas and able to lift five men, a 900-pound car, and 450 pounds of ballast you can buy for about \$1000. The cost of the gas which is to lift you on your flight through space varies from \$1 a thousand cubic feet for coal gas to \$7 a thousand cubic feet for hydrogen.

The envelope of the modern balloon is not sewed together as were old-style balloons. Instead of the bag being made up of segments joined on edge and running perpendicularly from the top to the bottom of the sphere, thus permitting a rip in any of these pieces to extend itself from the top to the neck of the balloon, the seams run horizontally as if the bag were made up of a series of cloth rings about a foot wide, each "ring," in turn, consisting of smaller pieces, or templates, measuring from 14 to 18 inches in length. In this manner the aéronaut is assured that in case of a tear, which is apt to happen during inflation, the rip will not extend farther than the nearest seam.

But what strikes you most as wholly inadequate and absurdly small is the little car or basket your pilot expects you to get into. The sides of the basket extend between your thighs and your waist line, depending upon your own height. Instead of being round as of old and thus permitting you to be rolled as if in a barrel in case your balloon runs away with you upon landing during a high wind, the car is rectangular, almost square, insuring that when dragged it slides over the ground on a side. A three-man car, weighing 400 pounds, consisting of inch-and-a-half-thick wicker and carrying 250 pounds of ballast besides anchor, ropes, etc., seems to you scarcely bigger than a large-sized wash basket and measures a puny $3\frac{1}{4}$ by 3 feet.

BALLOONING FOR LADIES.

THE lady balloonists, members of the Aéro Club of London, have furnished us with one of the chief sensations of the season.

The Princess di Teano is one of the fashionable women who have become identified with the sport. Aëronauts, like all those whose lives depend for safety upon the vagaries of the elements, have a firm belief that certain passengers carry good or bad luck in their wake, and the Princess di Teano, the reigning belle of a couple of seasons, is an especially popular fellow voyageur. Exceptional good luck has attended every ascent she has yet made.

The ethics of balloonists when making a descent are such as to make the possession of pluck an absolute necessity. No matter what immediate danger the unfortunate feminine aëronaut may see directly ahead, when being landed with an unexpected drop, and no matter how easily she could leave the balloon, she must not dream of doing so until the aëronaut in charge gives the word of command. For to lighten the car of one person's weight before the balloon is quite deflated might send it suddenly skyward, whence it might descend again with a drop, killing the occupants.

The fittings of the up-to-date balloon car, even when women passengers are to be taken, are of necessity meagre. In many cars the occupants have only just room enough to stand up in, though some of the bigger cars are provided as a special luxury with a very narrow wooden seat running across one side for the benefit of the feminine voyageurs. Most men elect to stand. A dozen or more bags of ballast—filled with finely-sifted sand—are placed in the bottom of the car.

Some balloons have among their fittings a small shovel with which the aëronaut ladles out this sand, a small handful at a time, for in a well-balanced balloon the throwing out of a single handful of sand will cause her to rise hundreds of feet in the air, so delicately is she poised.

A small aneroid barometer, a megaphone—for attracting the notice and asking questions of passers-by—a map, a statoscope—the newly-invented and delicate instrument which registers the rise or fall of the balloon, thus avoiding the necessity for throwing out pieces of paper in order to find out whether they rise or sink—and an electric torch, together with a trailing cord, and a grappling iron or anchor, complete the aëronaut's outfit, while a danger cord, or ripping cord, as it is technically termed, by means of which the balloon is ripped up in a previously prepared place to let the gas out quickly when making a rough descent on a gusty day, thus preventing the car and its occupants from being dragged at the heels of a half-deflated balloon through barbed wire or over glass hothouses and cucumber frames,

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is tied up in the rigging in a bright red bag to prevent its being accidentally touched by meddling onlookers before the start.

There is no side entrance to a balloon car, so a pile of sandbags is often arranged beside those destined to carry lady passengers. By this means they mount into their respective cars five minutes before the start, swinging themselves into the basket between the ropes of rigging.

It was chiefly in order that the Princess di Teano and the actress, Miss Granville, might see what experienced aeronauts declare to be one of the most impressive of all sights from a balloon—namely, that of the sun rising from above the mists of an early summer morning—that a midnight supper party was once organized. An ascent was made at 2 A. M. into the pitch-black night by two balloons.

"We shot right up through a big black cloud," said Miss Granville to a representative of the *Ladies' Realm*, "and for some time it was so dark that we could not even see each other's faces. We had an electric torch, though, with which we were enabled to consult our instruments, to glean some idea as to where we were and in what direction we were travelling.

"One of the most curious sights we saw before the sun rose was that of the moon, which appeared to bob from side to side of the heavens, now appearing on the right, now on the left of us, with the weirdest imaginable effect. The explanation was that we were spinning slowly around in the air; but in ballooning one feels absolutely no movement whatever.

"One may be travelling before a wind blowing forty miles an hour and yet appear to be in the midst of an impenetrable stillness and silence."

So still, indeed, is it to the occupants of the car that the feminine aeronaut does not even trouble to tie a motor veil around her hat.

Ballooning has always held an extraordinary fascination for women from the time of its inauguration, early in 1782. It was chiefly the mother wit of a feminine bystander who chanced to watch the first experiments of the famous brothers Montgolfier, and saw the weak points that doomed their earlier efforts to failure, which was responsible through a timely suggestion for the launching of the first balloon, and about two years later Madame Fible, the pioneer of women aeronauts, made her first ascent from Lyons.

BASEBALL.

THE AMERICAN NATIONAL GAME.

BY

ALBERT G. SPALDING.

HAVING been connected with athletic sports in one way or another for over forty years, I am naturally very much interested in all kinds of athletics, but without disparagement to any other sport, I don't mind admitting to you that my first and last love is the American national game of baseball.

Perhaps you would like to have me tell you something about the early history of baseball: and how it became the national sport of this country, its early struggles, how it was extricated from the gambling influences that practically controlled it in the early seventies, and how dissipation and other objectionable features were driven from its ranks, until it stands to-day probably the cleanest sport in the world.

Baseball is of American origin, was born in New York City, and the first baseball ground was located about where Madison Square now stands. Back in 1842 a few of the young business men of New York began to assemble every Saturday afternoon on these grounds to play what they called baseball. In 1845 these same young men organized the original Knickerbocker Baseball Club of New York, the first baseball club ever organized. This club printed the first playing rules in 1845, and it may interest you to know that the present game of baseball could to-day be played under these same rules with a few minor changes, showing that the main underlying principles of the game have not changed from that day to this.

Five years later, in 1850, the Gotham and Empire Clubs of New York were organized, and then began rival match games between clubs. In 1857 a convention of baseball players was held in New York, which resulted in the formation of the first National Association of Amateur Baseball Players in 1858, with a total membership of about twenty-five clubs, all from New York City or the immediate vicinity.

This national organization gave a great impetus to the game and clubs began forming in other cities.

The game had become well launched when the Civil War began in 1861. The New York baseball players of that period were among the first to respond to President Lincoln's call for troops, and they took their baseball accoutrements with them, and thus was the game introduced into the army, where it soon became a favorite camp pastime.

From an address before the Public Schools Athletic League of Greater New York. By permission.

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Every regiment had its baseball team and the monotony of camp life was very much relieved by match games of baseball. In some unaccountable manner the new game found its way over into the Confederate lines, and while those two magnificent armies could not agree upon national policies, they could agree upon baseball. At the close of the Civil War in 1865 the soldiers of both armies in returning to their homes disseminated baseball throughout the nation, so you can see that baseball has its patriotic side and became the national game of America through the efforts of those battle-scarred veterans of the Civil War.

These returning veterans became the baseball instructors to the youths of that period, and I happened to be one of those youths that caught the baseball fever at that time.

Baseball, thus introduced throughout the country, became a furore, and nearly every city, town, and hamlet had its baseball club.

The rivalry between cities became intense and any young man with baseball skill was eagerly sought for by wealthy clubs.

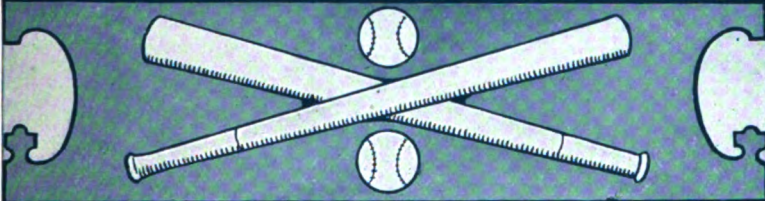
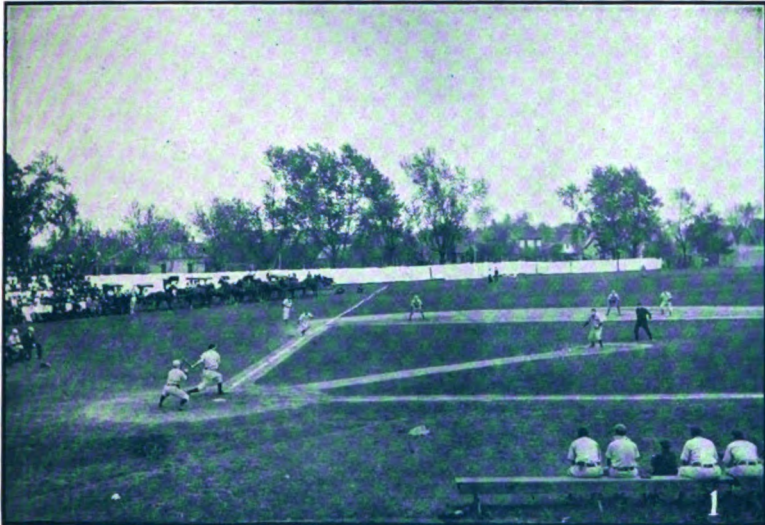
Every possible effort was made at this period to keep the game on a strictly amateur basis, but the demand of the public for a high degree of playing skill, together with the growing tendency to gamble on the result of the games, produced a sort of veiled professionalism which continued in vogue until 1871, when the first Professional Association of Baseball Players was organized, since which time the game has been governed by the professional element.

The tendency for gambling on the games that had arisen during the previous amateur period blossomed out into full bloom during 1871 to 1875.

Baseball poolrooms sprung up in every large city and were permitted on the baseball grounds, with the result which always happens when the gambling fraternity get possession of any athletic sport: the public interest began to wane, players were accused of throwing games, and at the close of 1875 baseball was near death's door.

As usually happens in this country when a public institution—and baseball is a public institution—becomes so bad and intolerable to the better element in the community, something or somebody invariably appears that can set things right again, and at this crucial period in baseball affairs there arose a man equal to the emergency in the person of the late Wm. A. Hulbert of Chicago, who is frequently referred to as "the man who saved the life of baseball."

It was my good fortune to be closely associated with Mr. Hulbert in his baseball reconstruction work, and to assist him in preparing the original Constitution of the National League, which was organized in 1876, and has ever since been a very important factor in the government and development of baseball. Through this new organization poolrooms were abolished from the grounds, public betting on the game was prohibited, and State legislatures were induced to pass laws prohibiting baseball poolrooms in all large cities. Liquor selling on



BASEBALL

1. Base-ball game upon Illinois field at the University of Illinois, May 9, 1903, between the Universities of Michigan and Illinois. Garland Stahl of Illinois had batted a home run, with bases full, just as the camera was snapped. It won the game and the series for Illinois and decided the Intercollegiate championship of the Middle West for the year.
2. The Chicago American League—The "White Sox" Baseball Club, Champions 1906.

Copyright, 1906, by Fred H. Wagner, Chicago, Ill.

all league grounds was no longer permitted; and everything possible was done to remove all objectionable features from the game.

It was a hard fight, and there were many discouragements, for it was like pulling one's self by the boot straps out of deep mud. In the first year of the National League it became necessary to expel two of the most prominent clubs—New York and Philadelphia—for failing to fulfil their contractual obligations to the League, and there has never been occasion since to expel a club for a similar offence. Two years afterward four prominent players were accused and convicted of throwing games in the interest of themselves and certain gamblers, and they were promptly expelled and never reinstated, and from that day to this not a single player has been convicted of dishonesty.

In 1881, ten of the most prominent League players were expelled for dissipation and drunkenness, with the result that these vices have practically become a thing of the past among baseball players. These determined and drastic actions of the National League in the early years of its existence, have resulted in bringing baseball up to its present high standard of honesty and efficiency, and public sentiment will see to it that those in control of the game in the future must keep this great national sport up to the highest standard. I look upon baseball and kindred sports as one of the greatest educational factors of the times. We live in a strenuous age, and our American boys and youths should be educated and developed along lines that will enable them to meet and cope with these conditions.

What can better fit a boy for the rough and tumble business life of to-day than a thorough schooling in athletics properly directed?

As the mental faculties grow and develop, let the physical body grow along with it, in order to make a combination that will be useful, and in our crowded cities how is it possible to thus develop our city boys except through a systematic and properly directed training in athletic sports? An American boy takes to athletic sports and games like a duck to water, but this natural inborn love needs proper direction, and that is what I understand the Public Schools Athletic League has undertaken to do for the boys of Greater New York.

Baseball not only develops the muscles and the whole physical body, but it is of still greater value in developing the mental faculties, for the ball player must be alert, must think quick and act with the thought, for there is no place on the team for the laggard.

It is also a great training for the temper, for a boy soon learns that losing his temper is equivalent to losing the game.

As a moral force nothing excels baseball, and athletic sports generally, for it is a healthy medium through which a boy's youthful vitality can work off naturally, and after a hard-fought game he has become so physically tired out that he has no inclination for anything except a good meal and bed.

The game of baseball affords splendid discipline for the mental and

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moral natures. The intense excitement of the game plays havoc with the emotions, for a player can go to the very heights of glory in victory, down to the very depths of despair in defeat.

There are no half-way stations, the journey is complete; the score is 10 to 4; you win or you lose.

After the game the victorious player walks or runs off the field with a proud step, touching only the high places, or perhaps his admiring friends may carry him off on their shoulders; but alas, how different is the step of the defeated player: his muscles are weary and almost refuse to work, his feet weigh a ton, and there is no glad hand or admiring friend to accompany him to the dressing-room. He looks crushed, and probably feels an unpleasant swelling in his throat. I know the feeling, boys, for I have been there. I know of no remedy for this tired, defeated feeling, but my experience long since taught me that the swelling in the throat can be reduced and the step made lighter by going, immediately after the game was over, up to the player who had played a similar position on the opposition team, shaking him by the hand and congratulating him on his victory, and telling him that he won because his team outplayed yours. Don't lay it on the umpire—only "muckers" do that—for that is unmanly, unsportsmanlike, and invariably untrue.

The victor of to-day may be the vanquished of to-morrow, so if the boy can have a few years of this kind of training he will learn not to be unduly elated in victory nor too much cast down in defeat, all of which tends to that self-poise and equilibrium so necessary in the evenly developed boy and man.

This is becoming an athletic age. Americans are becoming famous as the most skilful athletes in the world. While we are here this afternoon our returning victorious athletes from the recent Olympian games at Athens are approaching New York harbor with their brows covered with the laurel wreaths of victory won at the Stadium in the ancient city of Athens in Greece, the birthplace of athletic sports.

At Washington there sits in the executive chair our first Athletic President, whose sportsmanlike qualities, energy, and "square deal" brand of integrity are an inspiration to the boys of this country.

Because of the athletic spirit that is permeating the boys of our nation, future generations will see more honesty and less hypocrisy in high places, will hear more of square deal and less of graft, for the spirit underlying all athletic sports is fair play, honesty, and integrity.

RULES OF BASEBALL

As adopted by the National League and American Association of Professional Baseball Clubs. Many apply to match games between organized clubs, and therefore do not apply to cases where sides are chosen just before the game.

THE BALL-GROUND.

RULES 1-14.—Describe the proper manner of laying out the ball-ground, which it is hardly necessary to present here, since there is hardly a village or community of any kind to be found where one does not already exist.

THE BALL.

RULE 14. SECTION 1.—Must not weigh less than five nor more than five and one-quarter ounces avoirdupois, and it must measure not less than nine nor more than nine and one-quarter inches in circumference.

SEC. 2. For each championship game two regulation balls shall be furnished by the home club to the umpire for use. When the ball in play is batted to foul ground and out of sight of the umpire, the other ball shall be immediately brought into play. As often as one of the two in use shall be lost a new one must be substituted.

THE BAT.

RULE 15.—Must be entirely of hard wood, except that the handle may be wound with twine or a granulated substance supplied, not to exceed eighteen inches from the end.

It must be round, and it must not exceed two and three-quarters inches in diameter in the thickest part, nor exceed forty-two inches in length.

THE PLAYERS AND THEIR POSITIONS.

RULE 16.—The players of each club in a game shall be nine in number, one of whom shall act as captain, and in no case shall less than nine men be allowed to play on each side.

RULE 17.—The players' positions shall be such as may be assigned them by their captain, except that the pitcher, while in the act of delivering the ball to the bat, must take the position as defined in Rules 8 and 29.

RULE 18.—Players in uniform shall not be permitted to occupy seats on the stands, or to stand among the spectators.

RULE 19. SECTION 1.—No player shall attach anything to the sole or heel of his shoes other than the ordinary baseball shoe plate.

SEC. 2. The catcher and first baseman are permitted to wear a glove or mitt of any size, shape or weight. All other players are restricted to the use of a glove or mitt weighing not over ten ounces, and measuring in circumference, around the palm of the hand, not over fourteen inches.

PLAYERS' BENCHES.

RULE 20.—The players' benches must be furnished by the home club and placed upon a portion of the ground outside of and not nearer than 25 feet to the players' lines. One such bench must be for the exclusive use of the visiting club, and one for the exclusive use of the home club.

THE GAME.

RULE 21. SECTION 1.—Every championship game must be commenced not later than two hours before sunset.

SEC. 2. A game shall consist of nine innings to each contesting nine, except that

(a.) If the side first at bat scores less runs in nine innings than the other side has scored in eight innings, the game shall then terminate.

(b.) If the side last at bat in the ninth inning scores the winning run before the third man is out, the game shall terminate.

A TIE GAME.

RULE 22.—If the score be a tie at the end of the nine innings, play shall be continued until one side has scored more runs than the other in an equal number of innings, provided, that the side last at bat scores the winning run before the third man is out, the game shall terminate.

A DRAWN GAME.

RULE 23.—A drawn game shall be declared by the umpire when he terminates a game on account of darkness or rain, after five equal innings have been played, if the score at the time is equal on the last even innings played; except when the side that went second to bat is then at the bat, and has scored the same number of runs as the other side, in which case the umpire shall declare the game drawn without regard to the score of the last equal innings.

A CALLED GAME.

RULE 24.—If the umpire calls "Game" on account of darkness or rain at any time after five innings have been completed, the score shall be that of the last equal innings played, except, that the side second at bat shall have scored one or more runs than the side first at bat, in which case the score of the game shall be the total number of runs made.

A FORFEITED GAME.

RULE 25.—A forfeited game shall be declared by the umpire in favor of the club not in fault, at the request of such club, in the following cases:

SECTION 1. If the nine of a club fail to appear upon the field, or being upon the field, fail to begin the game within five minutes after the umpire has called "Play" at the hour appointed for the beginning of the game, unless such delay in appearing, or in commencing the game, be unavoidable.

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SEC. 2. If, after the game has begun, one side refuses or fails to continue playing, unless such game has been suspended or terminated by the umpire.

SEC. 3. If, after play has been suspended by the umpire, one side fails to resume playing within one minute after the umpire has called "Play."

SEC. 4. If a team resorts to dilatory movements to delay the game.

SEC. 5. If, in the opinion of the umpire, any one of the rules of the game is wilfully violated.

SEC. 6. If, after ordering the removal of a player, as authorized by the Rules, said order is not obeyed within one minute.

SEC. 7. If, because of removal of players from the game by the umpire, there be less than nine players in either team.

SEC. 8. If, when two games are scheduled to be played on the same afternoon, the second game be not commenced within ten minutes of the time of completion of the first game. The umpire of the first game shall be the timekeeper.

NO GAME.

RULE 26.—"No game" shall be declared by the umpire if he shall terminate play on account of rain or darkness before five innings on each side are completed. Except in a case when the game is called, and the club second at bat shall have more runs at end of its fourth innings than the club first at bat has made in its five completed innings; in such case the umpire shall award the game to the club having made the greatest number of runs.

SUBSTITUTES.

RULE 27. SECTION 1.—In every championship game each side shall be required to have present on the field, in uniform, a sufficient number of substitute players to carry out the provision which requires that not less than nine players shall occupy the field in any innings of the game.

SEC. 2. Any such player may be substituted at any time by either club, but a player thereby retired shall not thereafter participate in the game.

SEC. 3. The base-runner shall not have a substitute run for him except by the consent of the captains of the contesting teams.

CHOICE OF INNINGS—CONDITION OF GROUND.

RULE 28.—The choice of innings shall be given to the captain of the home club, who shall also be the sole judge of the fitness of the ground for beginning a game after rain, but, after play has been called by the umpire, he alone shall be the judge as to the fitness of the ground for resuming play after the game has been suspended on account of rain.

THE PITCHER'S POSITION.

RULE 29.—The pitcher shall take his position facing the batsman with both feet square on the ground, and in front of the pitcher's plate; but in the act of delivering the ball to the bat, one foot must be in contact with the pitcher's plate. He shall not raise either foot, unless in the act of delivering the ball to the bat, nor make more than one step in such delivery.

A FAIRLY DELIVERED BALL.

RULE 30.—A Fairly Delivered Ball to the bat, is a ball pitched or thrown to the bat by the pitcher while standing in his position and facing the batsman, the ball so delivered to pass over any portion of the home base not lower than the batsman's knee nor higher than his shoulder.

AN UNFAIRLY DELIVERED BALL.

RULE 31.—An Unfairly Delivered Ball is a ball delivered by the pitcher, as in Rule 30, except that the ball does not pass over any portion of the home base, or does pass over the home base, above the batsman's shoulder or below the line of his knee.

BALKING.

RULE 32.—A Balk shall be:

SECTION 1. Any motion made by the pitcher to deliver the ball to the bat without delivering it.

SEC. 2. Any delivery of the ball to the bat while his (pivot) foot is not in contact with the pitcher's plate, as defined in Rule 29.

SEC. 3. Any motion in delivering the ball to the bat by the pitcher while not in the position defined in Rule 29.

SEC. 4. The holding of the ball by the pitcher so long as, in the opinion of the umpire, to delay the game unnecessarily.

SEC. 5. Standing in position and making any motion to pitch without having the ball in his possession, except in the case of a "block-ball," as provided by Rule 35, section 2.

When the pitcher feigns to throw the ball to a base he must resume the above position and pause momentarily before delivering the ball to the bat.

If the pitcher fails to comply with the requirements of this rule the umpire must call "A balk."

SEC. 6. The making of any motion the pitcher habitually makes in his method of delivery, without his immediately delivering the ball to the bat.

SEC. 7. If the pitcher feigns to throw the ball to a base and does not resume his legal position and pause momentarily before delivering the ball to the bat.

DEAD BALLS.

RULE 33.—A Dead Ball is a ball delivered to the bat by the pitcher that touches any part of the batsman's person or clothing while standing in his position without being struck at, or that touches any part of the umpire's person or clothing while he is standing on foul ground without first passing the catcher.

RULE 34.—In case of a foul strike, foul hit ball not legally caught out, dead ball, or base-runner put out for being struck by a fair-hit ball, the ball shall not be considered in play until it is held by the pitcher standing in his position and the umpire shall have called play.

BLOCK BALLS.

RULE 35. SECTION 1.—A Block is a batted or thrown ball that is touched, stopped, or handled by any person not engaged in the game.

SEC. 2. Whenever a block occurs the umpire shall declare it and the base-runners may run the bases without being put out until the ball has been returned to and held by the pitcher standing in his position.

SEC. 3. In the case of a block, if a person not engaged in the game should retain possession of the ball, or throw or kick it beyond the reach of the fielders, the umpire should call "Time" and require each base-runner to stop at the last base touched by him until the ball be returned to the pitcher standing in his position and the umpire shall have called "Play."

THE BATSMAN'S POSITION—ORDER OF BATTING.

RULE 36.—The batsmen must take their position within the batsman's lines, as defined in Rule 10, in the order in which they are named in the batting order, which batting order must be submitted by the captains of the opposing teams to the umpire before the game, and this batting order must be followed except in the case of a substitute player, in which case the substitute must take the place of the original player in the batting order. After the first inning the first striker in each inning shall be the batsman whose name follows that of the last man who has completed his turn—time at bat—in the preceding inning.

RULE 37. SECTION 1.—When their side goes to the bat the players must immediately return to the players' bench, as defined in Rule 20, and remain there until the side is put out, except when called to the bat or they become *coaches* or substitute base-runners; provided, that the captain or one player only, except that if two or more base-runners are occupying the bases then the captain and one player, or two players, may occupy the space between the player's lines and the captain's lines to coach base-runners.

SEC. 2. No player of the side "at bat," except when batsman, shall occupy any portion of the space within the catcher's line. The triangular space behind the home base is reserved for the exclusive use of umpire, catcher, and batsman, and the umpire must prohibit any player of the side "at bat" from crossing the same at any time while the ball is in the hands of, or passing between, the pitcher and catcher, while standing in their positions.

SEC. 3. The players of the side "at bat" must occupy the portion of the field allotted them, but must speedily vacate any portion thereof that may be in the way of the ball, or any fielder attempting to catch or field it.

THE BATTING RULES.

RULE 38. SECTION 1.—A Fair Hit is a ball batted by the batsman—while he is standing within the lines of his position—that first touches "fair" ground, or the person of a player, or the umpire, while standing on fair ground, and then settles on fair ground before passing the line of first or third base.

SEC. 2. A Foul Hit is a similarly batted ball that first touches "foul" ground, or the person of a player, or the umpire while standing on "foul" ground.

SEC. 3. Should such "fair hit" ball bound or roll to foul ground, before passing the line of first or third base, and settle on foul ground, it shall be declared by the umpire a foul ball.

SEC. 4. Should such "foul hit" ball bound or roll to fair ground and settle there before passing the line of first or third base, it shall be declared by the umpire a fair ball.

RULE 39.—A foul tip is a ball batted by the batsman while standing within the lines of his position that goes foul sharp from the bat to the catcher's hands.

RULE 40.—A bunt hit is a ball delivered by the pitcher to the batsman who, while standing within the lines of his position, makes a deliberate attempt to hit the ball so slowly within the infield that it cannot be fielded in time to retire the batsman. If such a "bunt hit" goes to foul ground a strike shall be called by the umpire.

BALLS BATTED OUTSIDE THE GROUND.

RULE 41.—When a batted ball passes outside the grounds, the umpire shall decide if Fair should it disappear within, or Foul should it disappear outside of the range of the foul lines, and Rule 38 is to be construed accordingly.

RULE 42.—A fair batted ball that goes over the fence shall entitle the batsman to a home run, except, that should it go over the fence at a less distance than two hundred and thirty-five (235) feet from the home base, when he shall be entitled to two bases only, and a distinctive line shall be marked on the fence at this point.

STRIKES.

RULE 43.—A Strike is :

SECTION 1. A ball struck at by the batsman without its touching his bat ; or,
 SEC. 2. A fair ball legally delivered by the pitcher, but not struck at by the batsman.

SEC. 3. Any intentional effort to hit the ball to foul ground, also in the case of a "bunt hit," which sends the ball to foul ground, either directly, or by bounding or rolling from fair ground to foul ground, and which settles on foul ground.

SEC. 4. A ball struck at, if the ball touches any part of the batsman's person.

SEC. 5. A ball tipped by the batsman, and caught by the catcher, within ten feet from home base.

RULE 44.—A Foul Strike is a ball batted by the batsman when any part of his person is upon ground outside the lines of the batsman's position.

THE BATSMAN IS OUT.

RULE 45.—The Batsman is Out :

SECTION 1. If he fails to take his position at the bat in his order of batting, unless the error be discovered and the proper batsman takes his position before a time "at bat" is recorded, and, in such case, the balls and strikes called must be counted in the time "at bat" of the proper batsman, and only the proper batsman shall be declared out, and *no runs shall be scored or bases run because of any act of the improper batsman*, provided, this rule shall not take effect unless the out is declared before the ball is delivered to the succeeding batsman. *Should batsman declared out by this rule be sufficient to retire the side, the proper batsman the next innings is the player who would have come to bat had the players been out by ordinary play.*

SEC. 2. If he fails to take his position within one minute after the umpire has called for the batsman.

SEC. 3. If he makes a foul hit other than a foul tip, as defined in Rule 39, and the ball be momentarily held by a fielder before touching the ground ; provided, it be not caught in a fielder's hat or cap, or touched by some object other than a fielder before being caught.

SEC. 4. If he makes a foul strike.

SEC. 5. If he attempts to hinder the catcher from fielding or throwing the ball by stepping outside the lines of his position, or otherwise obstructing or interfering with the player.

SEC. 6. If, while the first base be occupied by a base-runner, three strikes be called on him by the umpire, except when two men are already out.

SEC. 7. If, after two strikes have been called, the batsman obviously attempts to make a foul hit, as in Rule 43, section 3.

SEC. 8. If, while attempting a third strike, the ball touches any part of the batsman's person, in which case base-runners occupying bases shall return as prescribed in Rule 49, section 5.

SEC. 9. If he hits a fly ball that can be handled by an infielder while first and second bases are occupied, or first, second and third with only one out. In such case the umpire shall, as soon as the ball is hit, declare infield or outfield hit.

SEC. 10. If the third strike is called in accordance with section 4, Rule 43.

SEC. 11. The moment a batsman is declared out by the umpire, he (the umpire) shall call for the batsman next in order to leave his seat on the bench and take his position at the bat, and such player of the batting side shall not leave his seat on the bench until so called to bat, except as provided by Rule 37, section 1, and Rule 52.

BASE-RUNNING RULES.

RULE 46.—WHEN THE BATSMAN BECOMES A BASE-RUNNER.

The Batsman becomes a Base-runner :

SECTION 1. Instantly after he makes a fair hit.

SEC. 2. Instantly after four balls have been called by the umpire.

SEC. 3. Instantly after three strikes have been declared by the umpire.

SEC. 4. If, while he be batsman, without making any attempt to strike at the ball, his person or clothing be hit by a ball from the pitcher unless, in the opinion of the umpire, he plainly avoids making any effort to get out of the way of the ball from the pitcher, and thereby permits himself to be hit.

SEC. 5. Instantly after an illegal delivery of a ball by the pitcher.

An illegal delivery of the ball is made if the pitcher's pivot foot be not in contact with the rubber plate at the time of the delivery of the ball, or if he takes more than one step in delivery, or if, after feigning to throw to a base, he fails to pause momentarily before delivering the ball to the bat.

BASES TO BE TOUCHED.

RULE 47.—The base-runner must touch each base in regular order, viz., first, second, third, and home bases, and when obliged to return (except on a foul hit) must retouch the base or bases in reverse order. He shall only be considered as holding a base after touching it, and shall then be entitled to hold such base until he has legally touched the next base in order or has been legally forced to vacate it for a succeeding base-runner. However, no base-runner shall score a run to count in the game until the base-runner preceding him in the batting list (provided there has been such a base-runner who has not been put out in that inning) shall have first touched home base without being put out.

ENTITLED TO BASES.

RULE 48.—The base-runner shall be entitled, without being put out, to take the base in the following cases:

- SECTION 1.** If, while he was batsman, the umpire called four balls.
- SEC. 2.** If the umpire awards a succeeding batsman a base on four balls, or for being hit with a pitched ball, or in case of an illegal delivery—as in Rule 46, section 5—and the base-runner is thereby forced to vacate the base held by him.
- SEC. 3.** If the umpire calls a "Balk."
- SEC. 4.** If a ball delivered by the pitcher, pass the catcher, and touch the umpire, or any fence or building within ninety feet of the home base.
- SEC. 5.** If, upon a fair hit, the ball strikes the person or clothing of the umpire on fair ground.
- SEC. 6.** If he be prevented from making a base by the obstruction of an adversary, unless the latter be a fielder having the ball in his hand ready to meet the base-runner.
- SEC. 7.** If the fielder stop or catch a batted ball with his hat or any part of his uniform except his gloved hand.

RETURNING TO BASES.

RULE 49.—The base-runner shall return to his base, and shall be entitled to so return without being put out:

- SECTION 1.** If the umpire declares a foul tip (as defined in Rule 39), or any other foul hit not legally caught by a fielder.
- SEC. 2.** If the umpire declares a foul strike.
- SEC. 3.** If the umpire declares a dead ball, unless it be also the fourth unfair ball and he be thereby forced to take the next base, as provided in Rule 48, section 2.
- SEC. 4.** If the person or clothing of the umpire interferes with the catcher, or he is struck by a ball thrown by the catcher to intercept a base-runner.
- SEC. 5.** The base-runner shall return to his base if, while attempting a strike, the ball touches any part of the batsman's person.

WHEN BASE-RUNNERS ARE OUT.

RULE 50.—The Base-runner is Out:

- SECTION 1.** If, after three strikes have been declared against him while batsman and the catcher fail to catch the third strike ball, he plainly attempts to hinder the catcher from fielding the ball.
- SEC. 2.** If, having made a fair hit while batsman, such fair hit ball be momentarily held by a fielder before touching the ground, or any object other than a fielder; **PROVIDED**, it be not caught in a fielder's hat or cap.
- SEC. 3.** If, when the umpire has declared three strikes on him while batsman, the third strike ball be momentarily held by a fielder before touching the ground; **PROVIDED**, it be not caught in a fielder's hat or cap, or touch some object other than a fielder before being caught.
- SEC. 4.** If, after three strikes or a fair hit, he be touched with the ball in the hand of a fielder before he shall have touched first base.
- SEC. 5.** If, after three strikes or a fair hit, the ball be securely held by a fielder while touching first base with any part of his person before such base-runner touches first base.
- SEC. 6.** If in running the last half of the distance from home base to first base, while the ball is being fielded to first base, he runs outside the three-foot lines, as defined in Rule 7, unless to avoid a fielder attempting to field a batted ball.
- SEC. 7.** If, in running from first to second base, from second to third base, or from third to home base, he runs more than three feet from a direct line between such bases to avoid being touched by the ball in the hands of a fielder; but in case a fielder be occupying the base-runner's proper path in attempting to field a batted ball, then the base-runner shall run out of the path, and behind said fielder, and shall not be declared out for so doing.
- SEC. 8.** If he fails to avoid a fielder attempting to field a batted ball, in the manner described in sections 6 and 7 of this rule, or if he, in any way, obstructs a fielder attempting to field a batted ball, or intentionally interferes with a thrown ball; **PROVIDED**, that if two or more fielders attempt to field a batted ball, and the base-runner comes in contact with one or more of them, the umpire shall determine which fielder is entitled to the benefit of this rule, and shall not decide the base-runner out for coming in contact with any other fielder.
- SEC. 9.** If, at any time while the ball is in play, he be touched by the ball in the hands of a fielder, unless some part of his person is touching a base he is entitled to occupy; **PROVIDED**, the ball be held by the fielder after touching him.
- SEC. 10.** The base-runner in running to first base may overrun said base, without being put out for being off said base, after first touching it, provided he returns at once and retouches the base, after which he may be put out as at any other base. If, in overrunning first base, he also attempts to run to second base, or after passing the base he turns to his left from the foul line, he shall forfeit such exemption from being put out.
- SEC. 11.** If, when a fair or foul hit ball (other than a foul tip as referred to in Rule 39) is legally caught by a fielder, such ball is legally held by a fielder on the base occupied by the base-runner when such ball was struck (or the base-

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runner be touched with the ball in the hands of a fielder), before he retouches said base after such fair or foul hit ball was so caught; PROVIDED, that the base-runner shall not be out, in such case, if, after the ball was legally caught as above, it be delivered to the bat by the pitcher before the fielder holds it on said base, or touches the base-runner with it; but if the base-runner, in attempting to reach a base, detaches it before being touched or forced out, he shall be declared safe.

SEC. 12. If, when a batsman becomes a base-runner, the first base, or the first and second bases, or the first, second and third bases, be occupied, any base-runner so occupying a base shall cease to be entitled to hold it, until any following base-runner is put out, and may be put out at the next base, or by being touched by the ball in the hands of a fielder in the same manner as in running to first base at any time before any following base-runner is put out.

SEC. 13. If a fair hit ball strike him before touching the fielder, and, in such case, no base shall be run unless forced by the batsman becoming a base-runner, and no run shall be scored or any other base-runner put out.

SEC. 14. If, when running to a base, or forced to return to a base, he fall to touch the intervening base, or bases, if any, in the order prescribed in Rule 47, he may be put out at the base he falls to touch, or being touched by the ball in the hands of a fielder in the same manner as in running to first base; PROVIDED, that the base-runner shall not be out in such case if the ball be delivered to the bat by the pitcher before the fielder holds it on said base, or touches the base-runner with it.

SEC. 15. If, when the umpire calls "Play," after any suspension of a game, he falls to return to and touch the base he occupied when "Time" was called before touching the next base; PROVIDED, the base-runner shall not be out, in such case, if the ball be delivered to the bat by the pitcher before the fielder holds it on said base or touches the base-runner with it.

WHEN BATSMAN OR BASE-RUNNER IS OUT.

RULE 51.—The umpire shall declare the batsman or base-runner out, without waiting for an appeal for such decision, in all cases where such player is put out in accordance with these rules, except as provided in Rule 50, sections 10 and 14.

COACHING RULES.

RULE 52.—The coacher shall be restricted to coaching the base-runner only, and shall not be allowed to address any remarks except to the base-runner, and then only in words of necessary direction; and shall not use language which will in any manner refer to, or reflect upon a player of the opposing club, the umpire, or the spectators, and not more than one coacher, who may be a player participating in the game, or any other player under contract to it, in the uniform of either club, shall be allowed at any one time, except, that if base-runners are occupying two or more of the bases, then the captain and one player, or two players in the uniform of either club, may occupy the space between the player's lines and the captains' lines to coach base-runners. To enforce the above the captain of the opposite side may call the attention of the umpire to the offence, and, upon a repetition of the same, the offending player shall be debarred from further participation in the game, and shall leave the playing field forthwith.

THE SCORING OF RUNS.

RULE 53.—One run shall be scored every time a base-runner, after having legally touched the first three bases, shall touch the home base before three men are put out. (Exception)—If the third man is forced out, or is put out before reaching first base, a run shall not be scored.

GENERAL DEFINITIONS.

"Play" is the order of the umpire to begin the game, or to resume play after its suspension.

"Time" is the order of the umpire to suspend play. Such suspension must not extend beyond the day of the game.

"Game" is the announcement by the umpire that the game is terminated.

An "Inning" is the term at bat of the nine players representing a club in a game, and is completed when three of such players have been put out, as provided in these rules.

A "Time at Bat" is the term at bat of a batsman. It begins when he takes his position and continues until he is put out or becomes a base-runner; except when, because of being hit by a pitched ball, or in case of an illegal delivery by the pitcher, or in case of a sacrifice hit purposely made to the infield which, not being a base-hit, advances a base-runner without resulting in a put-out, except to the batsman, as in Rule 45.

"Legal" or "Legally" signifies as required by these rules.

SCORING RULES.

BATTING.

No time at bat shall be scored if the batsman be hit by a pitched ball while standing in his position, and after trying to avoid being so hit, or in case of the pitcher's illegal delivery of the ball to the bat which gives the batsman his base.

or when he intentionally hits the ball to the field, purposely to be put out, or if he is given first base on called balls.

A base-hit should be scored in the following cases:

When the ball from the bat strikes the ground within the foul lines and out of reach of the fielders.

When a hit ball is partially or wholly stopped by a fielder in motion, but such player cannot recover himself in time to handle the ball before the striker reaches first base.

When a ball is hit *with such force* to an infielder that he cannot handle it in time to put out the batsman. (In case of doubt over this class of hits, score a base-hit and exempt the fielder from the charge of an error.)

When a ball is hit so slowly toward a fielder that he cannot handle it in time to put out the batsman.

That in all cases where a base-runner is retired by being hit by a batted ball, the batsman should be credited with a base-hit.

When a batted ball hits the person or clothing of the umpire. *In no case shall a base-hit be scored when a base-runner has been forced out by the play.*

FIELDING.

Where a batsman is given out by the umpire for a foul strike, or where the batsman fails to bat in proper order, the put-out shall be scored to the catcher. *In all cases of "out" for interference, running out of line, or infield fly dropped, the "out" should be credited to the player who would have made the play but for the action of the base-runner or batsman.*

An assist should be given to each player who handles the ball in assisting a put-out or other play of the kind.

And generally an assist should be given to each player who handles or assists in any manner in handling the ball from the time it leaves the bat until it reaches the player who makes the put-out, or in case of a thrown ball, to each player who throws or handles it cleanly and in such a way that a put-out results, or would result if no error were made by the receiver.

ERRORS.

An error shall be given for each misplay which allows the striker or base-runner to make one or more bases when perfect play would have insured his being put out, except that "wild pitches," "bases on balls," bases on the batsman being struck by a "pitched ball," or in cases of illegally pitched balls, balks and passed balls, *all of which comprise battery errors*, shall not be included in said column.

BASKETBALL.

BY

JAS. NAISMITH, UNIVERSITY OF KANSAS, LAWRENCE, INVENTOR OF
BASKETBALL.

FIFTEEN years ago basketball was introduced to meet a need that was urgent at the time and is of just as much moment to-day, viz.: There was a demand for some form of winter sport which would develop the whole man and at the same time be of such a nature that it would attract the individual. Formal gymnastics was about the only form of exercise that was available for the winter months, when outdoor games could not be indulged in. It was difficult to interest men, in this subject, who wanted simply health and recreation. It was generally agreed that there was no game that could be used in this way and the question of producing one was introduced. It seemed impossible, but that it was accomplished has been shown by the success that has attended basketball since its inception.

In the spring of 1892 it was first played in the Y. M. C. A. Training School at Springfield, Mass., and was carried by the students,

during their vacation, to their homes and introduced into their associations. Wherever it was introduced it became a permanent part of the physical work. When the school year was completed it was carried to widely different parts of the United States and Canada and it was not long until it was scattered to all parts of the world. Wherever the Y. M. C. A. was found there was basketball, and it was soon recognized as the Association game.

The first public announcement was as a new game published in the *Triangle*, the Training School paper. The thirteen original rules were given, and it was illustrated by a young Japanese who was then in school. These rules had been typewritten and placed on the bulletin board of the gymnasium for the direction of the students who first played the game.

Outside of the Y. M. C. A. one of the earliest institutions to take up basketball was the reformatory at Elmira, and in the *Summary* of the same year there is a short description of the game and an account of its origin.

Another institution that early took it up was Carlisle Indian School, and here it soon became a great favorite and has retained its popularity to the present time. It is one in which the Indian youth excels, and it has been credited with being one of the causes of the football success of Carlisle. When travelling in the woods one day the writer was surprised to find a couple of basketball goals made of wood hanging on two trees in a little clearance, with no habitation near.

In the early days of basketball it had much more of the recreative. The skill at present displayed had not been developed. There were no experts and there were always many ludicrous situations in the course of the game. So interesting was it to the spectators at that early date that within a month of its first introduction there was always a crowd of spectators watching the work of that same class which had revolted against their regular exercise but were enthusiastic over basketball.

The popularity of the game attracted the ladies, and a class was organized to play it and was kept up through the season. It was taken up by Smith College under the direction of Miss Berenson, and it has been for many years a prominent feature of the athletic work in that institution. It has spread among the ladies' colleges until it is played in nearly all and has been looked upon by some as distinctively a ladies' game. Some athletes have scorned it for this reason, but a very short trial has convinced them that though it may be played by ladies, it may be made so strenuous that a football man is soon glad to call time to recover his wind. The rules have been so modified that the ladies may take part in the game without fear of doing themselves an injury. They have been published in the Spalding Athletic Library. This is the only form of the game that the ladies should use.

The Western teams took some of these modifications and used them

in the boys' game, with the result that the game in the West is to-day much cleaner than in the East and the rules are much better observed, without destroying any of the skill, but on the other hand it has made it much swifter and more pleasant to look at.

The next modification of the rules was made to accommodate the professional teams in and around Philadelphia. The style of the game was somewhat changed to make it more interesting to the spectators. The contesting teams are enclosed in a screen so that the ball is always in play and there is not an idle moment from whistle to whistle. This style of game is confessedly for the spectators, and is no longer a sport, but is a form of entertainment which entails hard work on the players.

There was another attempt to formulate a set of rules differing from those gotten out by the rules committee. This was an attempt on the part of some of the colleges to obtain rules which would be better suited for college sport. The rules in force were thought to be too tame for men who were accustomed to the more vigorous of the outdoor sports such as football, etc. Most of the rules which were aimed at ungentlemanly conduct and rough play were eliminated, on the supposition that they were unnecessary and made the game too gentle. But the most expert players are the very ones who want the game kept as clean as possible, as then only can true skill be shown, and there is less dependence on weight and roughing the opponent. One year's trial was enough to convince the most sceptical of the wisdom of these rules, for there was no end of trouble on this very point. And even football has incorporated one of these rules for the first time in its latest edition, viz.: the one penalizing profanity on the field of play. The openness of the play and the closeness of the spectators to the field in basketball demand that the game be clean and free from objectionable features. There are teams for which there is no need of such a rule, but among the great number of men playing the game there are bound to be some who cannot control their tempers and their speech, and one of the chief benefits of this and other games is the cultivation of self-control. It is to be hoped that soon we will have two sets of rules only, one for the ladies and one for the men, each of these eliminating all the roughness and unfair play, so that the game may fulfil its mission of making men and women rather than basketball players.

At first there were nine men on each side, and frequently the whole class was divided into two sides. Thus a great many were able to get the benefit of the game. As many as fifty have played it at one time, and often there has been more than one ball used, when the whole scene resembled a grand carnival of fun rather than the game as we understand it to-day. Unfortunately this phase of the game has almost disappeared, and it is fast becoming a spectacle for the crowd rather than fun for the players. Whether the pleasure and recreation of the many outweigh the benefits derived from the skill

developed and displayed by the few, is the question that will decide the style of play adopted in any community.

The interest to the player does not lie in competition alone, for men will play with the ball where there are only a few present, and when a game is impossible and science is wanting. The sport of putting the ball into the basket seems to have an attraction sufficient to hold the expert as well as the novice. Indeed so strong is this attraction that in many institutions the ball is kept under lock and key to prevent its constant use. In others it is omitted from the equipment because it proves too attractive and disrupts regular class work in gymnastics. There is not a director of a gymnasium who has not at times wished that there was no such game as basketball.

If the game could be properly controlled, there would be no better method of giving students the necessary recreation than by giving each man the proper amount of basketball. A sufficient amount of exercise can be obtained in a short time; and that of an all-round nature, so that the control of the body, agility, and skill would go hand in hand with recreation and the acquisition or preservation of health.

The chief dangers of the game are those that pertain to the administration rather than to the game itself. The first and the one that most nearly approaches an inherent one is the danger of over-exertion. When a game is attractive enough to hold the interest of the player there is a tendency to work at it more than is good for him. Consequently the thing that is the game's best attribute becomes its greatest source of danger.

The remedy for this is, not to eliminate its interest, but to regulate its use. The evils of over-indulgence in this game are the development of the heart over the rest of the body and a drain on the nervous system.

The tendency to-day is to place too much importance on the development of skill, and this leads to many of the evils that are associated with the other games. When the winning of the game is such an important factor there is too great a temptation for the ordinary athlete to use unfair tactics, either in the personnel of the team, or in the method of play. Many institutions are limiting basketball to contests within the institution, and in nearly every case there are more men playing the game and usually these are the men who would not take part in other sports; while if winning outside games is the prominent feature there is apt to be a number of the men on the team who are on the other athletic teams, and thus they get a double share, and in the case of students it interferes with their class work.

Another tendency is to overlook the plain meaning of the rules and by mutual agreement to avoid the infliction of the penalties. While this may do no harm in some particular game, yet a repetition makes precedent more powerful than the written rules and no end of trouble ensues when teams from different sections of the country meet. The

violation of a rule should receive its penalty irrespective of the choice of the opponents, who may wish to take advantage of the same leniency when an opportunity occurs. Until the proper sentiment is established among the players, the only way for the game to be kept clean is for the officials strictly to enforce the rules regardless of the immediate results to the team. We owe something to the game, as well as to the team.

Basketball comes nearer being an international game than any other, and for this reason there should be as much uniformity as possible in the rules.

At present it seems as if the game were wavering in the balance between being one of skill and money-making, and accomplishing its original purpose, of giving health and recreation. Too often the value of a game is measured by its ability to attract a crowd to the grand stand, instead of its ability to attract a crowd to the field of play.

I believe it is possible to make basketball do double duty, by having the institution divided so that there is one section who play the game for its sport while there may be some who wish to specialize in this branch. These two classes of players should be kept apart, for the one party will destroy the benefits for which the other is seeking. Neither party should monopolize either the field of play or the time of the directors. There is a tendency for the director to devote his time to the men who wish to compete, and to allow the other class to play without any direction. If it is necessary that either team be neglected, it is better to spend the time on the men who do not know the game rather than on the experts, for they will work out new combinations with a very little suggestion. It is to be sincerely hoped that whatever modifications are made for the sake of the experts a due consideration will be had for the players who are seeking health and recreation from the sport.

OFFICIAL BASKETBALL RULES.

Adopted June, 1899, at Springfield, Mass.; Revised by Executive Committee of the Basketball Rules Committee, October 23, 24, 1905, at New York City.

RULE 1. SECTION 1.—Basketball may be played on any grounds free from obstruction, said grounds not to exceed 6,000 square feet of actual playing space.

SEC. 2. There must be a well defined line marked around the floor or field. The side boundaries shall be at least three feet from the wall, fence or other obstruction. The end boundaries shall be directly below the surface against which the goal is placed. This line shall form the boundary of the field of play. Upon agreement by both teams the boundary lines may be dispensed with.

SEC. 3. The field shall be divided into three equal parts by field lines, parallel to the end boundary lines.

SEC. 4. The field shall be laid out as per the regular plan.

RULE 2. SECTION 1.—The ball shall be spherical; it shall be made of a rubber bladder covered with a leather case; it shall be not less than 30 nor more than 32 inches in circumference; the limit of variability shall not be more than one-fourth of an inch in three diameters; it shall weigh not less than 18 nor more than 20 ounces.

SEC. 2. The ball shall be provided by the home team; except in serial championships, when it shall be furnished by the championship committee; it shall be tightly inflated and so laced that it cannot be held by the lacing, and shall otherwise be in good condition.

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SEC. 3. The ball made by A. G. Spalding & Bros. shall be the official ball. Official balls will be stamped as such and will be packed in sealed boxes.

SEC. 4. The official ball must be used in all match games. The REFEREE may in all match games and shall in serial championships declare all games void when this rule is violated.

RULE 3. SECTION 1.—The baskets shall be hammock nets of cord, suspended from metal rings 18 inches in diameter (inside). The rings shall be placed 10 feet above the ground in the centre of the short side of the actual playing field. The inside rim shall extend 6 inches from a rigid supporting surface.

SEC. 2. In case the supporting surface is not a wall of the building, a special background must be provided, which shall measure at least 6 feet horizontally and 4 feet vertically, and extend not less than 3 feet above the top of the basket. It may be of any solid material, but must be permanently flat, perpendicular and rigid.

SEC. 3. The baskets shall be rigidly supported. There must be no projections beyond the sides nor above the upper edge of the basket.

SEC. 4. The baskets made by A. G. Spalding & Bros. shall be the official baskets.

SEC. 5. The "official" baskets must be used in all match games. The REFEREE may in all match games and shall in serial championships declare all games void when this rule is violated.

SEC. 6. No spectators or others shall be permitted nearer than six feet of the baskets in any direction. The REFEREE shall see that this rule is enforced.

RULE 4. SECTION 1.—Teams shall number not less than five nor more than nine members.

RULE 5. SECTION 1.—The officials shall be a REFEREE, two UMPIRES, two SCORERS, two TIMEKEEPERS, and four LINESMEN; to be selected by each team.

RULE 6. SECTION 1.—The REFEREE in all cases must be a thoroughly competent and impartial person, and shall not be a member of either of the competing organizations.

SEC. 2. In all but championship games the visiting team shall choose the REFEREE, but shall notify the home team before the day of the game. Any team neglecting to send such notification within the limit specified shall forfeit the right to appoint the REFEREE. In all championship games the REFEREE shall be selected by the championship committee.

SEC. 3. Before the game begins the REFEREE shall see that the regulations respecting the ball, goal and grounds are adhered to. By mutual agreement of the CAPTAINS, the REFEREE may allow alterations in the rules regarding grounds and time, but not in goal, ball or teams. The REFEREE shall ascertain before the commencement of the game the time for beginning, or any other arrangements that have been made by the CAPTAINS.

SEC. 4. The REFEREE shall be judge of the ball. He shall decide when the ball is in play, to whom it belongs, when a goal has been made, and have power to call all fouls provided for in the rules.

SEC. 5. The REFEREE shall approve of the SCORERS, TIMEKEEPERS and LINESMEN before the game begins.

SEC. 6. Whenever the ball is put in play by tossing it up the REFEREE shall stand so that he shall throw the ball in a plane at right angles to the side lines.

SEC. 7. The REFEREE shall call time when necessary by blowing a whistle.

SEC. 8. No player but the CAPTAIN shall address any official. The REFEREE shall call a foul for violation of this rule.

SEC. 9. The REFEREE is the superior officer of the game and shall decide all questions not under the jurisdiction of the other officials, but he shall have no power to alter the decisions made by the other officials when it is in regard to matters under their jurisdiction.

SEC. 10. The REFEREE's term of office shall only extend from the time the game begins until it is concluded, and his decision awarding the game must then be given. His jurisdiction shall then end and he shall have no longer any power to act as REFEREE.

SEC. 11. The REFEREE decides when a goal has been made. (Rule 12, section 27.)

SEC. 12. Puts the ball in play. (Rule 12, sections 4, 5, and 6.)

SEC. 13. Indicates the two players nearest ball when time was called and who are to jump for it when play is resumed. (Rule 12, section 7.)

SEC. 14. Throws ball up when it is held by two or more players for any length of time. (Rule 12, section 9.)

SEC. 15. Awards point to opposing team when goal is touched. (Rule 12, section 28.)

SEC. 16. Makes decisions on Rule 12, section 30.

SEC. 17. Decides on violations of Rule 12, section 31.

SEC. 18. Disqualifies for rough play. (Rule 12, section 22.)

SEC. 19. Blows whistle when ball goes out of bounds. (Rule 12, section 14.)

SEC. 20. Makes all decisions on violations of Rule 12, section 5.

SEC. 21. Decides when player has held ball more than 5 seconds outside. (Rule 12, section 18.)

SEC. 22. Makes decisions when ball is bounced, etc., to out of bounds. (Rule 12, section 15.)

SEC. 23. Makes decisions on goals thrown according to Rule 12, section 34.

SEC. 24. Decides whether ball was in the air when whistle sounded and whether goal counts. (Rule 12, section 33.)

SEC. 25. When the whistles of two or more officials are sounded simultaneously, the one calling attention to a foul shall take precedence.

SUGGESTION.—*That whistles of different pitch be used.*

SEC. 26. Decides whether a goal thrown by a team making a foul counts. (Rule 12, section 35.)

SEC. 27. Decides games won by default. (Rule 12, section 36.)

SEC. 28. Decides when game has been won by default according to Rule 12, section 37.

SEC. 29. Announces the score of a defaulted or forfeited game. (Rule 12, section 38.)

SEC. 30. Calls fouls for persistent intentional delays. (Rule 12, section 3.)

SEC. 31. Calls fouls when the following rules are violated: Rule 6, section 8; Rule 12, sections 3, 4, 6, 24.

RULE 7. SECTION 1.—The UMPIRES in all cases must be thoroughly competent and impartial persons, and shall not be a member of either of the competing organizations.

SEC. 2. The UMPIRE shall be judge of the players, shall make decisions and call fouls as follows: UMPIRES call fouls for violations of Rule 12, sections 5, 11, 12, 13, 21, 22, 14, 42, 47, 43, 44, 45, 56.

SEC. 3. The UMPIRES shall make their decisions independently of each other, and a foul called by one shall not be questioned by the other.

SEC. 4. Whenever a foul is made the UMPIRE calling it shall blow a whistle, indicate the offender, and announce the nature of the foul, so that both the offender and the SCORER can hear it.

RULE 8. SECTION 1.—The SCORER shall be appointed by the management of the home team, subject to the approval of the REFEREE. If the visiting team so desires they may appoint an ASSISTANT SCORER, subject to the approval of the REFEREE. The ASSISTANT SCORER shall have no power to make decisions and shall perform such duties as are assigned by the SCORER. The SCORER's record is the only "official" score. In serial championship games the SCORER and his assistant shall be appointed by the Championship Committee, and their relation to each other shall be the same as the foregoing.

SEC. 2. The SCORER, before the commencement of the game, shall secure from the management of each team a list of their players, with their positions.

SEC. 3. He shall notify the REFEREE when a player shall be disqualified according to Rule 12, section 22.

SEC. 4. Match games shall be scored in and according to the details in the Spalding official score book, and this shall constitute the official record of the game.

SEC. 5. The use of blackboard, cards, etc., to announce the score to spectators, shall be in charge of the SCORER or one of his assistants and only the official score shall be announced thereon. In case of mistake on the board, cards, etc., it shall be corrected according to the record in the official score book.

RULE 9. SECTION 1.—A TIMEKEEPER shall be appointed by the management of the home team, subject to the approval of the REFEREE. If the visiting team so desires they may appoint an ASSISTANT TIMEKEEPER, subject to the approval of the REFEREE. The ASSISTANT TIMEKEEPER shall have no power to make decisions, and shall perform such duties as are assigned by the TIMEKEEPER. The TIMEKEEPER's record is the only "official" time. In serial championship games, the TIMEKEEPER and his assistant shall be appointed by the Championship Committee, and their relation to each other shall be the same as the foregoing.

SEC. 2. He shall note when the game starts and shall blow his whistle indicating the expiration of the actual playing time in each half.

SEC. 3. Time consumed by stoppages during the game shall be deducted only on order of the REFEREE. Time involved in making "free throws," etc., shall not be considered stoppages.

RULE 10. SECTION 1.—The LINESMEN shall be appointed by the management of the home team and subject to the approval of the REFEREE.

SEC. 2. There shall be four LINESMEN; two from each side.

SEC. 3. The LINESMEN shall stand at the four ends of the division lines. Their particular places shall be given them by the REFEREE.

SEC. 4. The LINESMEN shall be judges of fouls made by stepping on or crossing over the field lines, and shall call such fouls.

RULE 11. SECTION 1.—CAPTAINS shall be indicated by each side previous to the commencement of a match; they must be players in the game.

SEC. 2. The CAPTAINS shall be the representatives of their respective teams.

SEC. 3. The CAPTAINS shall toss for choice of baskets and be entitled to call the attention of the officials to any violations of the rules which they think have been made.

SEC. 4. Before the commencement of a match each captain shall furnish the SCORER with a list of their players with their positions.

RULE 12. SECTION 1.—The game shall consist of two halves of fifteen minutes each, with a rest of ten minutes between the halves. This is the time of actual play. These times may be changed by agreement of CAPTAINS and REFEREE except in serial championship games, in which case the Championship Committee shall make the change if necessary.

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SEC. 2. The teams shall change baskets at the end of the first half.

SEC. 3. Any persistent or intentional delay of the game shall be counted as a foul against the team so delaying. The REFEREE shall call this foul.

SEC. 4. At the opening of the game, at the beginning of the second half, after each goal, and at such other times as hereinafter provided, the REFEREE shall put the ball in play at the centre. Whenever the ball is put in play at the centre the players who are to jump for same must keep both feet within the circle, and the REFEREE shall toss the ball up in a plane at right angles to the side lines to a greater height than either of the centre players can jump, and so that it will drop between them. Section 3 may be applied when players delay game by not coming to centre promptly or stepping out of circle before or during jumps.

SEC. 5. When the REFEREE puts the ball in play at centre, he shall blow his whistle when the ball reaches its highest point, after which it must be first touched by either or both of the centres. If the ball is batted to outside by one or both of the centres it shall again be put in play at centre. The ball may either be caught or batted by one of the centres.

SEC. 6. Whenever the ball is put in play other than in the centre, the players who are to first touch the ball must not stand further than two feet from the spot indicated by the REFEREE where the ball is to fall and have both feet together until the jump is made. If this rule is violated, section 3 may be applied by the REFEREE.

SEC. 7. If the ball is in bounds when "time" is called the REFEREE shall stand between the players and the nearer side line and put the ball in play by tossing it up in such a manner that it will drop near the spot where it was when "time" was called. The two opponents nearest this spot when time was called shall be the first to touch the ball after play is resumed. They shall be indicated by the REFEREE. If, however, the ball is held in tie between the centre and forward or guard (i. e., over the field line) the ball shall be tossed up between the centre and her centre opponent indicated by the REFEREE.

SEC. 8. If the ball is out of bounds when "time" is called, play shall be resumed at the whistle of the REFEREE the same as if time had not been called.

SEC. 9. When the ball is held by two or more players for any length of time the REFEREE shall blow his whistle, stop the play and throw the ball up from where it was held. (Rule 6, section 6; also Rule 12, section 7.)

SEC. 10. The ball may be thrown or batted in any direction with one or both hands.

SEC. 11. The ball shall not be kicked or struck with the fists. The REFEREE or UMPIRE shall call a foul for violation of this rule.

SEC. 12. A player shall not advance with the ball while in bounds, nor across the line to out of bounds with one or both feet. She must play it from the spot on which she catches it. Allowance is to be made for one who catches it while running, provided she throws it at once or stops as soon as possible. If in the judgment of the REFEREE she stops as soon as possible and at the end of the run she has one foot over the line, touching the floor on the outside, a foul for carrying over shall not be called if she immediately withdraws the foot that is over the line, but if she carries the foot that is inside the field of play to the floor on the outside, a foul shall be called for carrying over. This shall not be interpreted as interfering with a player's turning around without making progress as long as she keeps one foot in place. The REFEREE or UMPIRE shall call a foul for violation of this rule.

SEC. 13. When a ball has been caught with both hands it shall not be bounded on the floor more than three times, and that at least knee height, until it has been touched by some other player. This does not interfere with her throwing for goal twice or more in succession, even if no other player touches it between times. The UMPIRE or REFEREE shall call a foul for violation of this rule.

SEC. 14. The ball is out of bounds only when it has completely crossed the line and is either touching the floor or in the possession of a player who has one or both feet outside, except as provided in section 12.

SEC. 15. When the ball is caused to go out of bounds in any manner intentionally or unintentionally (except in violation of section 12) and remains there, the REFEREE shall give it to the opposite side at the point where it left the field of play.

SEC. 16. In case of a doubt in the mind of the REFEREE as to which side caused the ball to go out of bounds, it shall be tossed up between two players indicated by the REFEREE, at the point where it left the field of play.

SEC. 17. When the ball goes out of bounds and immediately returns, play shall continue whether or not it was touched while out of bounds, except if the whistle of the REFEREE is blown, the ball shall then be put in play as though it had not returned to the field of play.

SEC. 18. A player is allowed five seconds to hold the ball out of bounds. A player must not step over the boundary line until after she has played the ball, and if, in the judgment of the REFEREE, either of these rules is violated, the REFEREE shall give the ball to an opponent.

SEC. 19. The ball may be thrown into the field of play in any direction, from *any spot* (outside of bounds) on a line drawn at right angles to the boundary line at the point where the ball crossed it. The ball may be thrown or bounced into the field of play, and must be played by some other player before the player

who passed it in can again play it. When either of these rules are violated the REFEREE shall give the ball to the opponent at the same spot.

SEC. 20. There shall be no interfering with the player who is returning the ball: that is, no part of the person of her opponent shall be outside of the field of play, and the ball may not be touched until it has crossed the line. If either of these rules is violated the REFEREE shall return the ball to the player who had it and have it again put in play at the original place.

SEC. 21. There shall be no tackling, holding or pushing of an opponent. The hands or arms shall not be used in any way to interfere with the progress of a player who has not the ball. Grasping the clothing of a person or player with the hands or putting one or both arms about a player shall be called holding. The REFEREE or UMPIRE shall call a foul for violation of this rule.

SEC. 22. There shall be no shouldering, tripping, striking, kicking, hacking, or intentional or unnecessary roughness of any kind. The REFEREE or UMPIRE shall call a foul for violation of this rule. The REFEREE may for the first, and shall for the second offence, disqualify the offender, for that game and for such further period as the Committee in charge shall determine. A foul is a violation of the rules, whether committed unintentionally, ignorantly or otherwise. The fact that a foul is made is the only guide for the officials in calling the same. The REFEREE has power to disqualify for violation of this rule whether foul was called or not.

SEC. 23. A substitute shall be allowed for a player who has been disqualified, and the foul made by her shall be counted.

SEC. 24. Whenever, because of sickness or accident to a player, it becomes necessary for the REFEREE to call "time," play must be resumed in five minutes. If the injured player is unable to resume play by that time, a substitute shall take her place, or the game starts at once without her. If it becomes necessary for any reason to change the players the REFEREE may, upon notice from the captain, call "time" for the substitution; providing the SCORES has been notified and the new player is ready to start at once. Section 8 may be applied when necessary. A player once removed from the game cannot play again during that game.

SEC. 25. A game must be decided by the winning of the most points in thirty minutes playing time, or the amount of time agreed upon previously by captains and REFEREE, except in case of a tie.

SEC. 26. In case of a tie the game shall continue (without exchange of baskets) until either side has made two additional points. The goals may be made either from field or foul line, the team first scoring 2 points wins. In case of a tie and both teams make the second points simultaneously through both teams scoring on double fouls, the game shall continue, as provided for in section 28.

SEC. 27. A goal made from the field shall count as two points; a goal made from a foul shall count as 1 point; a goal thrown shall count for the side into whose basket the ball is thrown, even though it was done by mistake. To constitute a goal, the ball must enter and remain in the basket until after the REFEREE's decision. The REFEREE decides when a goal has been made.

SEC. 28. If the basket or ball is touched by an opponent when the ball is on the edge of the basket, the REFEREE shall award 1 point to opposing team.

SEC. 29. If a player while trying for goal is fouled by an opponent, and it is called by either the REFEREE or UMPIRE, the REFEREE shall award 1 point to the team whose player was fouled, and if the player succeeds in making a goal, it shall also count. This shall not interfere with an additional free throw for goal from foul line.

SEC. 30. When a foul has been made the opposite side shall have a free throw for the basket at a distance of fifteen feet from a point on the floor directly beneath the centre of the basket, measuring towards the opposite basket. The player having a free throw shall not cross the fifteen-foot line until the ball has entered or missed the basket. If this rule is violated, a goal, if made, shall not be scored, and if missed, the ball shall be dead and put in play in the centre. The ball cannot be thrown to any person, but must be thrown at the basket. The REFEREE makes the decisions for violations of this rule.

SEC. 31. No player shall stand nearer than six feet to the thrower, nor in a lane six feet wide from the thrower to the basket, nor interfere with the ball until after it reaches the basket. The player shall not be interfered with in any way whatever, either by players or spectators. If this rule is violated by one of the opposite team, and a goal is not made, she shall have another free throw. If violated by one of her own team, or by players of both teams and a goal is made, it shall not count, and whether missed or made, the ball shall be thrown up in the centre. If the goal is not made and no rules have been violated the ball shall be in play. The players must stay back of the line until the ball has entered or missed the basket. The REFEREE makes the decisions for violation of this rule.

SEC. 32. When two or more fouls are called at same time on opposite sides, they shall be thrown in succession and the ball shall be put in play at the centre after the last throw. When two or more fouls are called at the same time on one team, they shall be thrown in succession. If a goal is made on the last throw, the ball shall be put in play, at the centre; if missed the ball is in play.

SEC. 33. If a player throws for the basket and the REFEREE decides the ball

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was in the air when the whistle of the REFEREE, UMPIRE or TIMEKEEPER or LINESMAN sounded, and the throw results in a goal, it shall count.

SEC. 34. When a player makes a throw for the basket and the REFEREE decides that part of her person was touching the floor out of bounds, if a goal is thrown it shall not count; if not made, the ball shall be considered in play.

SEC. 35. A goal thrown before the whistle can be blown for a foul *made by the team throwing it* shall not count. The REFEREE makes decisions on this rule.

SEC. 36. If only one team puts in an appearance at the appointed time, the REFEREE shall announce that the team complying with the terms agreed upon shall be declared the winner of the game by default. (See section 37.)

SEC. 37. When it happens, however, that neither team is ready to begin playing at the hour appointed for the game, the team which completes its number first and appears on the field ready for play cannot claim a default from its opponent. The latter shall be entitled to fifteen minutes' additional time, and if then unable to present a full team shall be obliged to play short-handed or forfeit the game. The REFEREE shall be the authority on this rule.

SEC. 38. Any team refusing to play within three minutes after receiving instructions to do so from the REFEREE shall forfeit the game. (See section 39.)

SEC. 39. The REFEREE shall announce a team defaulting or forfeiting a game the loser by the score of 2 to 0.

SEC. 40. Two hands on a ball are necessary to secure it. In case of doubt in the mind of the REFEREE as to which player first put her two hands on the ball, he shall toss it up at the spot where it was held by the players.

SEC. 41. In no case may a player remove the ball from the hands of an opposing player, either by *snatching* or *batting* it. The UMPIRE shall call a foul for violation of this rule.

SEC. 42. The ball may not be held longer than three seconds inside of bounds. The REFEREE or UMPIRE shall call foul for violation of this rule.

SEC. 43. The ball may not be "juggled," *i. e.*, tossed into the air and caught again to evade holding. The REFEREE or UMPIRE shall call foul for violation of this rule.

SEC. 44. Touching the field line or the ground beyond with any part of the body constitutes a foul. (This does not debar a player from leaning or reaching over the field line.) The REFEREE or UMPIRE shall call foul for violation of this rule.

SEC. 45. No guarding may be done over the opponent's person when she has the ball. The REFEREE or UMPIRE shall call foul for violation of this rule.

SEC. 46. No player may hand the ball to another player. The ball must be *thrown* to another player. The REFEREE or UMPIRE shall call foul for violation of this rule.

RULE 13. SECTION 1.—The UMPIRE shall make decisions and call fouls for the violation of all rules except those specifically reserved to the REFEREE. See Rule 6, section 8; Rule 12, sections 3, 4, 6, 24.

SEC. 2. Fouls are classified according to their penalties, as follows:

GENERAL.

1. Players addressing officials (Rule 6, section 8).
2. Touching the ball in centre (Rule 12, section 5).
3. Kicking or striking ball (Rule 12, section 11).
4. See Rule 12, section 12.
5. Bouncing the ball more than three times or lower than the knee (Rule 12, section 13).
6. Holding more than three seconds (Rule 12, section 43).
7. Delaying game (Rule 12, section 3).
8. Tackling, holding, pushing opponents (Rule 12, section 21).
9. Snatching or batting ball from hands of an opponent (Rule 12, section 42).
10. Juggling (Rule 12, section 44).
11. Touching the field line with any part of the body (Rule 12, section 45).
12. Guarding over an opponent's person (Rule 12, section 46).
13. Handing the ball to another player (Rule 12, section 47).

SPECIFIC.

Fouls for which Players may be Disqualified:

1. Striking.
2. Kicking.
3. Shouldering.
4. Tripping.
5. Hacking.
6. Unnecessary rough play. (Rule 12, section 22.)

Officials are expected to be as strict as possible. In all cases not covered by these rules officials are to use their own judgment, in accord with the general spirit of the rules.

BOATS AND BOATING.

President Charles W. Elliot of Harvard tells us that "Rowing is a sport which is absolutely clean and honorable, and there is only one other sport in college of which you can say that, and that is tennis. Another thing that can be said about rowing, it is highly co-operative in its nature. You have got to get eight men to do their level best all together. That is a mighty wholesome lesson for all life. You will hardly get a better lesson than that in your college or your life course. It is the lesson of doing your level best, faithful to your mates. Another thing about it which lasts for life: that is, that in rowing you are not working for money or any selfish object; you are working for fun, for comradeship, for the honor of your college."

"Rowing is the best sport there is. It always has been. It is comparatively an unchanging sport. There is no secret practice, no invisible performance. It is all in the open, and that is a good deal to say about a sport nowadays. All the long-lived sports changed little from generation to generation, and if you see a sport in which there are new tricks from year to year you will know by that fact that it is not a good sport to have in college."

The Component Parts of Boats.

ROWING boats consist of the bows; the stern, or entrance; the stern where are the rudder and the lines for steering; the rowlocks, for giving purchase to the oars; and the thwarts, or seats.

At the bottom are the footboards, which are easily removed, in order to bail out any water which may leak into the boat. Besides these parts there is a board placed across the boat for the feet of the rower, called a stretcher. The whole boat is composed of planks, called streaks, nailed upon a light oak framework, called the timbers, or rigs; and the upper streak, upon which the rowlocks are placed, is called the wale-streak. Boats with two rowlocks opposite each other are called sculling boats, and are propelled by a pair of light oars called sculls, the art being called "sculling." When a boat is fitted with a pair of rowlocks not opposite each other, it is called a pair-oared boat. If with two in the middle opposite each other, and two others, one before and the other behind, but not opposite each other, it is called a *randan*. When a boat has four rowlocks, none of which are opposite one another, it is called a four-oared boat, and so on up to ten oars, which is the utmost limit in common use for any kind of boat but the pleasure barge, which sometimes has twenty-four oars. The rowlock nearest the bow is called the bow rowlock, or No. 1; the next No. 2, and so on; and the oars used in them receive the same number, the one nearest the stern being called the "stroke oar." The rowlocks in river and sea boats are somewhat different in shape though identical in principle, both consisting of a square space of about the breadth of a man's hand, and both lying on the wale-streak; but in river boats being generally bounded before and behind by a flat piece of oak or ash called, respectively, the tholepin and stopper; whilst in sea boats they are merely common round wooden pins dropped into holes made in the wale-streak, but still receiving the same names. The tholepin is for the purpose of pulling the oar against, whilst the stopper prevents the oar from slipping forward when the rower is pushing it in that direction after the stroke.

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The Oars and Sculls.

A scull is a small oar used with one hand, and requiring a pair, as in the case of oars, one being placed in the rowlock on each side the boat, and the pair being used by one person with his right and left hands. Oars are used by both hands, and a pair-oared boat consequently requires two oarsmen; a four-oared boat four, and so on. Both sculls and oars consist of the same parts, except that the handle of the *oar* is made long enough for both hands. In every case there is a rounded handle, a loom, square in form, and extending from the handle to the button, or about one-third of the length of the oar; and beyond the button is the blade, which is first nearly round, and then gradually widens, until it assumes the form best adapted for laying hold of the water, which is now found to be broad rather than long, as was formerly thought to be desirable. The button is a piece of leather nailed on to prevent the oar from slipping through the rowlock, but only used in river rowing, as it is not adapted to the rough work which is often met with in sea rowing.

Boating Terms.

BOW OAR, the *starboard* upright oar towards the bow of the boat.

STROKE OAR, the oar rowed by the strokesman.

STROKESMAN, the *sternmost* man of the rowers.

STROKESIDE, the port or right side.

BOWMAN, the man nearest the bow of the boat.

COCKSWAIN, the man who steers the boat.

THOLEPINS, the pins which sometimes are used for the rowlocks.

HEADFAST, sometimes called the *painter*. A rope fixed forward to fasten the boat after landing.

TO UNSHIP THE SCULLS, simply means to take them out of the rowlocks.

ROWED OFF; when this direction is given by the cockswain, all the oars are laid in with their blades forward.

IN BOW; at this phrase, the bowman gets the boat-hook ready to clear away from the shore.

Sea Rowing.

This is necessarily less elegant than river rowing, because of the rough nature of the element on which the exercise is pursued. The oar must be grasped firmly in the hands, both grasping the oar between the thumbs and fingers. The whole art consists in the crew moving backward and forward together, called "swinging," and laying hold of the water as well as they can, taking care to avoid pulling in the air with great force when there is a trough or interval between two waves, and on the other hand equally avoiding a heavy wave, which has a tendency to dash the oar out of the hand. All this requires practice in the rowers, and also in the steersman, called the cockswain, who should watch for the high waves, and warn his men when a heavy

one is coming. He should also take care to cross the roll of the sea as much as possible, so as to avoid being struck on the side of the boat called "the counter," which would either swamp her or else knock the oars out of the rowlocks. In this kind of rowing, the "feathering" of the oar, to be presently described, is not attempted, on account of the roughness of the water, but it is merely pulled steadily, but strongly, backward, and is then pushed forward in the rowlocks.

River Rowing.

The art of river rowing is capable of a high degree of elegance, and few sights are more pleasing to a lover of graceful forms than that of a crew of fine lads, or young men, rowing well together and in good style. To do this requires great practice, and attention to a few essential points, which we will here endeavor to describe.

Management of the Oar.

The rower should, as far as possible, take some good oarsman for his model, and endeavor to imitate him in every respect, which is the only mode of acquiring a good style. Description is useful in putting the learner in the way of acquiring what is to be taught, but it is not all-sufficient for the purpose. In the first place, the learner should place himself square on the seat, with his feet straight before him, and the toes slightly turned out. The knees may either be kept together, or separated considerably, the latter being in our opinion the better mode, as it allows the body to come more forward over the knees. The feet are to be placed firmly against the stretcher, which is to be let out or shortened, to suit the length of the individual, and one foot may be placed in the strap which is generally attached to the stretcher in modern boats. The oar is then taken in hand, raising it by the handle, and then either at once placing it in the rowlock, or else first dropping it flat on the water, and then raising the handle it may gently be lowered to its place. The outside hand is placed upon the handle, *with the thumb as well as the fingers above it*, while the other hand firmly grasps it lower down, keeping the nut toward the person. The arms are now quickly thrust forward until they are quite straight at the elbows, *after which* the back follows them by bending forward at the hips, carefully avoiding any roundness of the shoulders. When the hands have reached their full stretch they are raised, and the blade quietly and neatly dropped into the water; immediately after which, and with the water just covering the blade, the body is brought back with a graceful yet powerful action, till it reaches a part a little behind the perpendicular of the back of the seat, when the hands are brought back to the ribs, the elbows gliding close by the hips, and at the last moment, as the hand touches the rib, the wrist of the inside hand is depressed, the knuckles being at the same time brought against the chest, and the oar is made to rotate in the rowlock, which is called "feathering" it, and by which

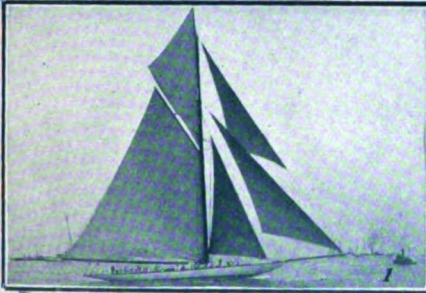
it is brought cleanly out of the water. The next action is to push the oar rapidly forward again, first however restoring it to its original position in the rowlock, which is effected by raising the wrist, and then darting the arms forward till the elbows are quite straight, which brings the rower to where we started from in the description. In "backing water," the reverse of these actions takes place. The oar is first reversed in the rowlock, and then it is *pushed* through the water with as much power as is needed, and *pulled* through the air. When the oars on one side are pulled, and those on the other are backed, the boat is made to turn on its own water. "Holding water" is effected by the oars being held in the position of backing without moving them.

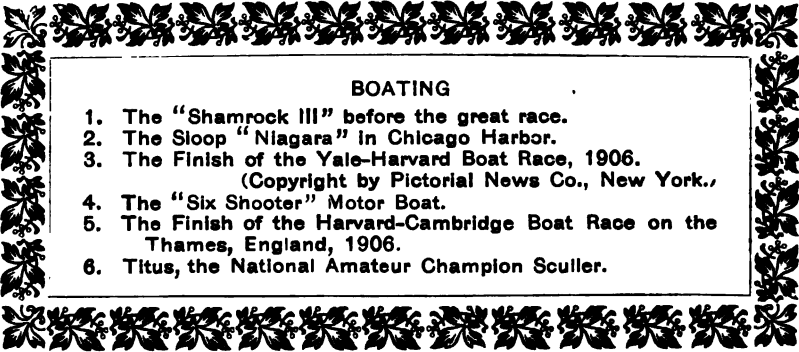
Six Essential Points in Rowing.

1st, To straighten the arms before bending the body forward; 2d, to drop the oar cleanly into the water; 3d, to draw it straight through at the same depth; 4th, to feather neatly, and without bringing the oar out before doing so; 5th, to use the back and shoulders freely, keeping the arms as straight as possible; and 6th, to keep the eyes fixed upon the rower before them, avoiding looking out of the boat, by which means the body is almost sure to swing backward and forward in a straight line.

Management of the Boat.

Every boat without a rudder is manœuvred in the water, either by pulling both sides alike, in which case it progresses in a straight line, or by reversing the action of the oars, equally on both sides, pushing them through the water instead of pulling them, and called backing water, when the boat recedes; or by pulling one side only, on which the boat describes a segment of a circle, which is made smaller by pulling one oar, and backing the other. By means of a rudder the boat is made to take a certain course, independent of the rowers, called "steering," the chief art in which consists in keeping the rudder as still as possible, by holding the lines "taut," and avoiding pulling them from one side to the other more than is absolutely necessary. Some steersmen think it necessary to swing backward and forward with a great effort, but this is quite useless, and the more still they keep the better. Every cockswain should know the course of the stream or tide; and when meeting other boats, he should, if he is going down stream, give them the side nearest the shore, so as to allow them the advantage of the slack water, which is quite prejudicial to him. When a crew are steered by a competent cockswain, they ought to be perfectly obedient to his commands, rowing exactly as he tells them. His orders are communicated by the following words, viz.: when desiring his crew to row he says, "Pull all"; or if wishing any one oar to be pulled, he says, "Pull bow," or "Pull No. 3," or 4, etc., as the case may be. If they are to stop rowing, he says "Easy all," or for





BOATING

1. The "Shamrock III" before the great race.
2. The Sloop "Niagara" in Chicago Harbor.
3. The Finish of the Yale-Harvard Boat Race, 1906.
(Copyright by Pictorial News Co., New York.,
4. The "Six Shooter" Motor Boat.
5. The Finish of the Harvard-Cambridge Boat Race on the
Thames, England, 1906.
6. Titus, the National Amateur Champion Sculler.

any one oar, "Easy bow," or No. 2. The same kind of order is conveyed when "backing" or "holding water" is desired; the only variation, as before, being between confining his order to any one or more oars, or extending it to all. In this way all the evolutions practicable on the water are managed, and the cockswain has complete control over the boat, being able to cause her to be rowed slowly or quickly, or to be stopped, backed, or turned on her own centre.

Landing and Launching.

If the tide be in your favor, bring the boat in a rather slanting direction toward the place of landing, so that as you reach the place the tide may take the stern down, as it is always best to land stern to tide. When you get to the landing-place, unship the sculls as before directed: but instead of letting them lie alongside, lay them in the boat, with the looms aft and the blades forward; then take hold of the headfast, jump ashore, and fasten the boat safely. This applies to river rowing; but in landing on the seashore when there is a swell, a little more care must be used; your boat, however, will be larger and stronger manned. In this case you must watch for a smooth; as soon as you have it, "give way" with all your power to the shore. The bowman must be ready to jump ashore with the painter in his hand, and pull the boat up out of the reach of the surf; all hands must jump out, after having first laid in their oars as before directed, and help him if he is not strong enough.

Launching a boat from the beach is sometimes a more difficult affair. When there is a considerable swell, and the boat is large (it will of course be strongly manned), the two bowmen get into the boat, with their oars ready to act; the other men equally divided lay hold of each side of her gunwale, entering the water with her and forcing her head to the sea. They must not, however, all jump in until she is fairly afloat, for if she were to ground and ship a sea, the probability is that her head would be turned, and that the next sea would capsize her before they could prevent it. In such cases, loss of life is by no means uncommon. But when the boat is afloat her head is sometimes turned for want of readiness on the part of the rowers; in such case, let two bowmen with oars or boathooks go to the bow on the lee of the boat, and by forcing them into the strand push the head of the boat seaward. Lying broadside to a sea is very dangerous, but if care and decision are used the boat can generally be kept head to sea; in fact, it is much more easy to keep it so than to return it, when the surf has once thrown it toward the shore.

Faults to be Avoided.

Catching Crabs.—This term implies the act of falling backward from the seat, through not taking hold of the water in the attempt to pull.

Not Keeping Time.—Independent of the awkwardness of the ap-
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pearance, this habit will be an effectual bar to your rowing in concert with any master of the art. Not keeping time, recollect, is not putting your oar into the water at the same time as the stroke oar.

Not Keeping Stroke.—This, be it observed, is totally different from the preceding fault. It is not doing work at the same time as the stroke oar; and this may be neglected even when you have kept time by putting your oar in the water at the same moment as the strokesman did his. Though not so unseemly, it is the most destructive fault that can be committed; for it must be evident that the speed of the boat must depend upon the simultaneous and equal effort of its whole crew. Recollect, therefore, that the pull should commence the moment the blade is properly immersed in the water.

Doubling the Body over the Oar at the end of the Stroke.—This prevents the shooting of the arms and body simultaneously forward, which is a most important feature in good rowing.

Jerking is a fault to which men who are powerful in the arms are particularly liable; as, instead of throwing the body gradually back, and thus partially pulling by their weight, they depend solely upon the muscles of their arms. They therefore give a violent muscular effort, which not being continued by falling back, the stroke ends, as it were, too soon, producing a jerk, which destroys the uniform swing throughout the boat, and thus decreases the propulsive power, and ultimately tires out the man. It is very annoying to the other part of the crew.

Rowing Round.—This fault arises from not entering the water deep enough at the first. The rower feels that he has not sufficient resistance (and is in danger of catching a crab), he consequently deepens his water with the blade of an oar, forming a portion of a circle, and brings the flat part of the blade perpendicularly to the water, thereby tending to drag the boat down by its pressure; this is a great fault, and must be avoided.

Slacking the Arms Too Soon.—This not only decreases the power of the stroke, but generally causes a positive impediment to the boat's rapid progress; for the habit is generally accompanied by one or two additional errors, viz., either feathering the scull before it is out of the water; or allowing the boat to carry it along. In the first, you add to your own labor; in the second, you, to a certain extent, stop the boat. Very light boats are apt to cause these faults. The remedy in such a case is, to dip the scull deeper at the commencement of the stroke; but the learner must recollect that the same faults are committed in ordinary boats.

Throwing up water in rowing must be carefully avoided. It is excessively annoying to those on the same side of the boat.

Capping the end of the oar with the hand has a very awkward appearance, and conduces greatly to other faults.

Rowing with a round back is another very common fault, and must be avoided because considerable loss of power is the consequence.

LAWS OF BOAT RACING

OF THE NATIONAL ASSOCIATION OF AMATEUR OARSMEN.

Starting.

1. All boat races shall be started in the following manner: The starter, on being satisfied that the competitors are ready, shall give the signal to start.

2. If the Starter considers the start false, he shall at once recall the boats to their stations; and any boat refusing to start again shall be disqualified.

3. Any boat not at its post at the time specified shall be liable to be disqualified by the Umpire.

4. The Umpire may act as Starter if he thinks fit; where he does not so act, the Starter shall be subject to the control of the Umpire.

5. Boats shall be started by their sterns, and shall have completed their course when their bows reach the finish.

Water.

6. A boat's own water is its straight course, parallel with those of the other competing boats, from the station assigned to it at the start to the finish.

7. Each boat shall keep its own water throughout the race, and any boat departing from its own water will do so at its peril.

8. The Umpire shall be sole judge of a boat's own water and proper course during the race.

Fouls.

9. It shall be considered a foul, when, after the race has commenced, any competitor, by his oar, boat or person comes in contact with the oar, boat or person of another competitor; unless, in the opinion of the Umpire, such contact is so slight as not to influence the race.

10. No fouling whatever shall be allowed; the boat committing a foul shall be disqualified.

11. The Umpire may, during a race, caution any competitor when in danger of committing a foul.

12. The Umpire shall decide all questions as to a foul.

13. A claim of foul must be made to the Umpire by the competitor himself, and if possible, before getting out of his boat.

14. In case of a foul, the Umpire shall have the power—(a.) To place the boats (except the boat committing the foul, which is disqualified), in the order in which they come in. (b.) To order the boats engaged in the race, other than the boat committing the foul, to row over again on the same or another day. (c.) To re-start the qualified boats from the place where the foul was committed.

Accidents.

15. Every boat shall abide by its accidents, except when during a race, a boat while in its own water shall be interfered with by any outside boat, the Umpire may order the race to be rowed over, if in his opinion, such interference materially affected its chances of winning the race.

Assistance.

16. No boat shall be allowed to accompany a competitor for the purpose of directing his course or affording him other assistance. The boat receiving such direction or assistance shall be disqualified at the discretion of the Umpire.

Umpire.

17. The jurisdiction of the Umpire extends over the race and all matters connected with it from the time the race is specified to start until its final termination, and his decision in all cases shall be final and without appeal.

18. The Judge-at-the-Finish shall report to the Umpire the order in which the competing boats cross the line, but the decision of the race shall rest with and be declared by the Umpire.

19. Any competitor refusing to abide by the decision, or to follow the directions of the Umpire, shall be disqualified.

20. The Umpire, if he thinks proper, may reserve his decision, provided that in every case such decision be given on the day of the race.

21. Contestants rowing a dead heat shall compete again after such interval as may be appointed, and the contestant refusing to so row shall be adjudged to have lost the race.

Turning Races.

22. In turning races each competitor shall have a separate turning stake, and shall turn from port to starboard. Any competitor may turn any stake other than his own, but does so at his peril.

CANOE RACING REGULATIONS.

RULE 1.—A canoe, to compete in any race of the A. C. A., must be sharp at both ends, with no counter stern or transom, and capable of being efficiently paddled by one man, and must come within the prescribed limits, as follows: Maximum length, 16 feet, and for that length a maximum beam of 30 inches.

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Minimum beam, 28 inches. Beam may be increased 1-8 inch for each full inch of length decreased. No canoe shall have a draft of more than 10 inches, except the unclassified boats, to which class the limits of length and breadth only shall apply.

In centreboard canoes, the keel outside of the garboard shall not exceed 1 1-4 inches in depth, including a metal keel band of not over 1-4 inch deep. The centreboard must not drop more than 18 inches below the garboard, and when hauled up must not project below the keel. Canoes without centreboard may carry keels not over 3 inches deep below garboard, and not weighing more than 36 pounds. Leeboards may be carried by canoes not having centreboards.

Measurements.—The length shall be taken between perpendiculars at the fore-side of stem and the aft side of stern. The beam shall be taken at the widest part, not including the beading, which shall not exceed 1 1-2 inches in depth. If deeper, it shall be included in the beam. The word "beam" shall mean the breadth formed by the fair lines of the boat, and the beam at and near the water line shall bear a reasonable proportion to the beam at the gunwale.

The "cruising canoe" shall be one which conforms to the above conditions, and, in addition, has a well not less than 16 inches wide for a length of 3 feet 6 inches, with a sleeping space of 6 feet, of which at least 5 feet shall be clear.

The centreboard, when housed, shall not project below the keel or above the coaming. The sliding seat shall not be longer than the beam of the boat, and no standing sail shall be used. The Regatta Committee may rule out any canoe which, in their opinion, does not conform to the spirit of these regulations.

The foregoing rules of measurement shall not be interpreted to disqualify any canoe built prior to January 1st, 1890, which conforms to the rules prior to that date.

RULE 2.—None but members of the American Canoe Association, unless upon the invitation of the Regatta Committee, shall be permitted to enter its races, and no canoe shall enter that is not enrolled on the Secretary's books, and no member who is in arrears to the Association shall compete in any race or claim any prize while such arrears remain unpaid.

No canoe shall be entered at any one meet by more than one man. The "crew" of each canoe shall consist of one man only, unless the programme of the Regatta states the contrary. Members must paddle or sail their own canoes.

A canoe which is not owned or used for racing by any other member present, shall be deemed to be the canoe of the member bringing it to camp. In double canoe races, the owner may associate any other member with himself.

RULE 3.—All entries must be in writing, on the blanks provided, and must be handed in to the Regatta Committee within such time as they may direct.

RULE 4.—Every canoe entering, except for an upset race, must have her entry number conspicuously placed on canoe or man when paddling, and on both sides of mainsail while sailing. The clerk of the course shall provide each man, when he makes his entry, with three prints of his number on cloth.

RULE 5.—Flags shall be given as prizes as follows: A first prize in each race, and a second in each regular event when more than two finish.

The winners of the Paddling Trophy, the Sailing Trophy and the first record man shall be given large practical bunting flags, with the year and race plainly marked thereon, and the five best flags at the disposal of the Regatta Committee shall be given to the first five record men. Prizes donated for special races or competitions may be accepted at the discretion of the Regatta Committee. No prizes of money shall be raced for.

Races.—There shall be three record races. No. 1, paddling and sailing combined; No. 2, paddling; No. 3, sailing. To obtain a place on the record, a contestant must enter and finish in all three record races. None but men who have entered for the record will be allowed to enter in any record races. Only such contestants as finish in all three races will receive a credit number according to position, relative to each other in each race—the highest number given in each race being equal to the number of the contestants, and the next one less, and so on; the three numbers given added together give the credit amount of the record.

In the record races each contestant shall use but one canoe and one sailing rig, which shall be a practical holsting and lowering rig.

In case of unavoidable accident which prevents a man from finishing in any one race, the Regatta Committee may, at its discretion, permit such canoe to enter the other two races, and her marks to be counted for the record, but he shall receive zero for the race which he does not finish.

The contestant obtaining the highest aggregation of points becomes the leading honor man for the year. There shall be a race for the paddling trophy. The total number of contestants shall be unlimited. There shall be a race for the A. C. A. sailing trophy. Conditions as follows: Sailing canoe, A. C. A. rules, no limit to rig or ballast; time limit, 8 1-2 hours; distance, 9 miles. Accredited representatives of foreign clubs, not exceeding five in number, shall be eligible. In case of more than five foreign entries, the first five received shall be eligible to start. The total number of starters shall not exceed fifteen and the ten or more vacancies (after deducting the foreign entries) shall be selected from competitors in the special "Unlimited Race," as follows: The Regatta Committee shall nominate two and the balance (after deducting foreign entries) shall be taken from the leading men at the finish in their order.

RULE 6.—The mode of turning stakeboats, and all directions for each race shall

be announced in the programme of the Regatta Committee or posted on the bulletin board one hour before the race is called; and any competitor not knowing the course, or mistaking it, or not following these rules, does so at his own risk. Stakeboats and buoys will be left on the port hand, when not stated distinctly to the contrary. The committee shall have the power to change the direction of the race at any time before the first signal, and shall indicate the same by flags, according to Rule 13. The start and finish in all races shall be by the bow.

RULE 7.—No pilotage or direction from any boat or from the shore will be allowed, and any one accepting such assistance may be disqualified.

RULE 8.—A canoe touching a buoy or other canoe, unless wrongfully compelled to do so by another canoe, shall be disqualified. In case of a foul, the non-fouling canoe must go over the course, unless disabled beyond the possibility of temporary repair, in order to claim the race. Every canoe must stand by its own accidents. If a canoe, in consequence of the violation of any of the Rules, shall foul another canoe, or compel another canoe to foul any canoe, buoy or obstruction, or to run aground, she shall be disqualified.

RULE 9.—Should the owner of any canoe, duly entered for a race, consider that he has fair ground of complaint against another, he must give notice of same, before leaving his boat on the finish of the race, to the Regatta Committee, and must present the same in writing within one hour.

The sum of one dollar shall be deposited with each protest, to be forfeited to the Association should the protest not be sustained. The Regatta Committee shall, after hearing such evidence as they may deem necessary, decide the protest, and the decision if unanimous, shall be final; but in case it is not unanimous, an appeal may be made to the Executive Committee, when a dollar must be filed, and the Commodore shall call a meeting of the Executive Committee at once to hear and determine the matter, whose decision shall be final.

No member of either committee shall take part in the decision of any question in which he is interested. In all cases where a protest is lodged on the ground of fouling, evidence of actual contact shall be necessary to substantiate the protest. The Regatta Committee shall, without protest, disqualify any canoe which, to their knowledge, has committed a breach of the Rules.

Paddling Races.

RULE 10.—Paddling races shall be started by the starter asking, "Are you ready?" On receiving no answer he shall say, "Go." If he considers the start unfair, he may recall the boats, and any canoe refusing to start again shall be distanced.

The combined paddling and sailing race shall be started in the same manner, the word "Go" being immediately followed by a gun.

RULE 11.—A canoe's own water is the straight course from the station assigned it at starting. Any canoe leaving its own water shall do so at its peril; but if the stern of one canoe is a canoe's length ahead of the bow of another, the former may take the water of the latter, which then becomes its own water, and it shall only leave it at its peril.

Sailing Races.

RULE 12.—The paddle shall not be used in sailing races except for steering when the rudder is disabled, or shoving off when aground, afoul of anything, or in extreme danger, as from a passing steamer or from a squall.

RULE 13.—Five minutes before the start a signal will be given and a blue flag hoisted, and four minutes later a second signal will be given and a yellow flag hoisted, and one minute later a third signal will be given to start and an A. C. A. flag hoisted and left up.

Any canoe which crosses the course side of the starting line prior to the third signal must return above the line and recross it, keeping out of the way of all competing canoes, using the paddle if necessary, but after the third signal the start shall be considered as made, and all canoes on either side of the line shall be amenable to the Sailing Rules. Canoes may take any position for starting, and prior to the third signal, may be sailed and worked in any manner (outside aid not allowed). A green flag displayed signifies that buoys are to be left to starboard, a red flag means to port. The Regatta Committee may vary the manner of starting at their discretion, but all sailing races should be started to windward when practicable, and under a time limit.

RULE 14.—All shiftable ballast, except centreboards, shall be carried within the canoe, and no fixed ballast shall be carried below the keelband. Ballast may be shifted, but no ballast shall be taken in or thrown out during a race.

RULE 15.—A canoe overtaking another shall keep out of the way of the latter, but when rounding any buoy or vessel used to mark out the course, if two canoes are not clear of each other when the leading canoe is close to and is altering her helm to round the mark, the outside canoe must give the other room to pass clear of the mark, whichever canoe is in danger of fouling. No canoe shall be considered clear of another unless so much ahead as to give free choice to the other on which side she will pass. An overtaking canoe shall not, however, be justified in attempting to establish an overlap and thus force a passage between the leading canoe and the mark after the latter has altered her helm for rounding.

RULE 16.—Canoes close-hauled on the port tack shall give way to those on the starboard tack. In the event of a collision being imminent, owing to the canoe

on the port tack not giving way, the canoe on the starboard tack shall luff and go about but shall never bear away. A canoe on the port tack compelling a canoe on the starboard tack thus to give way forfeits all claim to the prize.

RULE 17.—Canoes going free shall always give way to those close-hauled on either tack.

RULE 18.—When canoes close-hauled are approaching a shore, buoy or other obstruction, and are so close that the leewardmost cannot tack clear of the canoe to the windward of her, and by standing on would be in danger of fouling the obstruction, the canoe to windward shall, on being requested, go about, and the canoe requesting her to do so shall also tack at once.

RULE 19.—Should two or more canoes be approaching a weather shore or any obstruction, and be so close to each other that the weathermost one cannot bear away clear of the one to the leeward of her, and by standing on would be in danger of running aground or of fouling the obstruction, then the canoe that is to leeward shall, on being requested, at once bear away until sufficient room is allowed for the weathermost canoe to clear the obstruction.

RULE 20.—A canoe may luff as she pleases, in order to prevent another from passing her to windward, provided she begins to luff before an overlap has been established. An overlap is established when an overtaking canoe has no longer a free choice on which side she will pass, and continues to exist as long as the leeward canoe by luffing or the weather canoe by bearing away, is in danger of fouling. A canoe must never bear away out of her course to prevent the other passing to leeward; the lee side to be considered that on which the leading canoe of the two carries her mainboom. The overtaking canoe, if to leeward, must not luff until she has drawn clear ahead of the canoe she has overtaken.

RULE 21.—A canoe may anchor during a race, provided the anchor is attached or weighed on board the canoe during the remainder of the race. A canoe shall not be propelled by rocking or fanning.

RULE 22.—A change in these rules desired by any member of the Association shall be presented by the Regatta Committee, with their approval or disapproval, to the Executive Committee for final action; notice of such change having been given in the official organs at least two weeks before the vote of the Executive Committee is taken thereon.

RULE 23.—In case of temporary vacancies in the Regatta Committee, the other members shall appoint substitutes.

BOWLING.

JUST as in England there is no village without its cricket field—so in America there is no village without its bowling alley where young and old of both sexes may find healthful recreation if only the place is properly ventilated and kept free from dust.

“Any one can learn to bowl,” says Mr. W. V. Thompson, the famous bowler of Chicago. “Let all beginners step back from the foul line five steps. Stand erect, face the pins and let the weight of the ball rest on your left hand; take a firm grip with the right hand, swing the ball and see if the grip is all right. Now, don’t run, just walk fast four steps, starting with your right foot, and deliver the ball with the left foot in front. Do not bend your arm or your back; keep your feet apart and bend your knees. Form an imaginary line to the right side of the head pin and bowl on that line. Do not force the ball at first, you will have speed to burn in a week. Get the swing and delivery and you will get the pins.”

CONDENSED BOWLING RULES.

A game consists of 10 frames.

A Frame consists of 10 pins placed on the triangle of spots 1 foot apart. Each player is allowed 3 balls, which he must roll without stepping or sliding over the “Scratch Line.”

A Strike is made when all the pins are knocked down by the first ball. It

entitles the bowler to 10 points in that frame and as many more points as the next two balls knock down pins in succeeding frames. When the pins are all down, that frame is played and another player takes his turn.

A Spare is made when all the pins are knocked down by the first two balls. It entitles the bowler to 10 points in that frame and as many more as the first ball in the next frame knocks down.

The points gained by strikes and spares are in addition to those made by the balls in the succeeding frames.

Any strikes and spares remaining after the 10th frame is rolled are rolled immediately and count one point for each pin knocked down.

A foul ball is made by the player stepping or touching anything beyond the foul line. Pins knocked down by a foul ball or by a ball rolling in the gutter before it reaches the pins, or rebounding from the cushions, do not count, and must be reset before another ball is rolled. All such balls, however, count as balls rolled.

Fallen pins (deadwood) must be removed from the alley after each ball.

To keep a score a board or paper is ruled with two vertical spaces for each player and 12 horizontal lines, one for the names at the top, 10 for the 10 frames, and one for the totals. The points made (Pins knocked down by 3 or less balls) are set in the left column for each frame under the bowler's name, and the total score in the right column. A strike is marked double X or two parallel lines in the left column. A spare X or —. When the strike or spare is rolled in the next frame, the pins are added to the 10 already made and to the total of the right column.

BOWLING ON THE GREEN, OR LAWN BOWLS.

BY

WM. L. CAUFIELD, SECRETARY FALL RIVER (MASS.) BOWLING GREEN CLUB.

THIS is one of the oldest of outdoor games, and on account of its freedom from undue exertion on the part of its votaries it is peculiarly well adapted to all ages. For those advanced in years it offers a mild and healthful exercise with no drawbacks on the score of being too fatiguing, with plenty of interest and excitement, especially when played by Rinks as in the Scottish game of Bowls. It is equally well adapted for younger men, and in fact players of all ages take delight in this old-fashioned sport, including many of the fair sex.

In New York City prior to the Revolutionary War a Bowling Green was maintained near Battery Park, where the men of leisure were wont to meet on the greensward and enjoy the game. The district in which the Green was located still bears the name of Bowling Green.

The game seems to have fallen into disuse for some time after the War of Independence, but was revived again in the adjoining State of New Jersey some fifteen years ago, a Club being formed at Dunellen, N. J., by some English and Scotch residents of New York and New Jersey. This was followed by the establishment of Bowling Clubs at Jersey City, New Brunswick, N. J.; Boston and Lowell, Mass.; San Francisco; and more recently at Fall River and New Bedford, Mass.; at Kearny, N. J.; and Brooklyn, N. Y. All of these Clubs are in flourishing condition with, in some cases, a membership of over 250. Over the border in Canada the game is still more popular. In the

Province of Ontario alone there are upwards of sixty Bowling Clubs in existence, all with large membership and fine club quarters. At Toronto, which is the headquarters of the Ontario Bowling Association, an Annual Tournament is held at which all the Clubs belonging to the Association meet and compete for valuable prize cups and other prizes. In 1905 a Tournament was held at Toronto and neighborhood, and about sixty bowlers from the British Isles visited and took part in the games. Annual Tournaments are also held at Niagara on the Lake, play extending over three weeks. The Championship title of the United States rests with the Fall River (Mass.) Bowling Green Club at the present time, that Club being the holder of the handsome Silver Cup trophy, which has been successively held by the Boston Curling Club, New Jersey Bowling Green Club, Fall River Bowling Green Club, and Kearny (N. J.) Bowling Green Club. The Fall River Club succeeded in winning it from the Kearny Club this year, having lost to them in a close contest the preceding year.

The Green is usually laid out about 120 feet square which allows for six Rinks of 20 feet each, and is bounded by a ditch and bank. The Green should be almost flat or level and the Bowls used are of regulation size, of about five inches in diameter and made of lignum vitæ. They are so shaped as to draw or bias towards the Jack or object ball, and to the right or left of the Jack according to position of the opponents' Bowl.

A full Rink consists of four players on each side described as lead, second, third (or Vice-Skip), and Skip. The Skip on each side is Skipper or Captain and takes his position near the Jack and directs the other players until his turn comes to play, when the Vice-Skip or third player then directs the Skip how to play. Each player has a pair of Bowls and the first player of the side opening the game, which is decided by the tossing of a coin, throws the Jack,—which usually consists of a white porcelain ball about $2\frac{1}{2}$ inches in diameter,—to the opposite end of the Rink—the player having previously taken his position on the mat placed exactly in the centre of the Rink and 5 feet from the ditch. The Jack must rest at a distance of 75 feet or over from the mat or it is not playable and must be returned and thrown again by the first player on the opposing side. After the Jack has been moved to the centre of the Rink No. 1 player bowls one of his pair of woods, the object being to lay the Bowl as near the Jack as possible, after which No. 1 player on the opposing side delivers a wood; he is followed by the player who began the game delivering his second wood or bowl, and so on in this order until each player has delivered both his bowls. The points go to the side having a bowl nearest the Jack and as many of their Bowls as lie nearest the Jack count one each. For example,—Rink "A" has two bowls nearest the Jack, Rink "B" has the third nearest Bowl, this counts two points to Rink "A"; the remaining bowls do not count. The game is usually played 21 ends or 21 points up as may be agreed upon.

LAWS OF LAWN BOWLS.

[As formulated by the Scottish Bowling Association.]

I.—RINKS OR DIVISIONS OF THE GREEN.

1. The green shall be divided into spaces called rinks, not less than 19 nor more than 21 feet in width, numbered consecutively, the centre of each rink being marked on the bank at each end by a pin or other device, and the four corners of the rink by pins driven into the ditch. The side boundary of the rink shall stretch from bank to bank.

[To prevent disputes, it is recommended that the pins at the opposite ends of the rink should be connected by a linen thread, drawn tight on the surface of the green; and that, where practicable, the boundary pins of an outside rink be placed at least two feet from the side ditch. It is also recommended that the bank be not less than 18 inches in height, with an angle from the green of not more than 120 degrees.]

2. When a match is to be played, the numbers of the rinks should be put into a bag or other receptacle, and drawn at the green by the skips or their representatives.

3. Ordinary games may be played, without having recourse to drawing, on a rink mutually agreed upon.

II.—BOWLS—SIZE AND BIAS.

1. No bowl shall exceed 16 1-2 inches in circumference, nor 3 1-2 lbs. in weight, nor have a less bias than the Standard Bowl adopted by the Association.

2. Any bowl to which objection is taken shall be tested by comparison with a standard bowl of the Association, bearing the Association's stamp. Any objection must be taken at the start, or not later than the sixth end of a game.

In the case of a club match or competition, the test shall at once be applied, at the distance of 32 yards, by two referees appointed by the parties, and if the referees disagree, they shall appoint an oversman. In the event of a bowl being declared of a less bias than the standard, the further use of it in that club match or competition shall not be allowed, and the party at fault shall, from the stage at which the game then stood, play with any bowl, conform to standard, selected for him by the referees or oversman, or forfeit the game. In the event of the game being so forfeited, the objecting rink or player shall, in addition to being declared winner, be entitled to add to its or his score one shot for such number of shots or ends as may still remain to be played.

In the case of a tournament, the bowl or bowls objected to by an opponent shall, at the conclusion of the game, be taken possession of by the Secretary of the tournament, who shall have the same forthwith tested by two of the *umpires of the tournament*, who are not members of the same club as either of the parties, and who, if they cannot agree, shall call in another of the umpires, who must also be a neutral person, to determine whether the objection is *frivolous*; but if there be reasonable ground for doubt, the bowl or bowls shall at once be sent to one of the officers of the Association, to be tested by him. The officer shall test and return without delay all bowls thus sent to him, and shall also send to the Secretary of the tournament a written report of the result of the test. The decision of the umpires, oversman, or officer, as the case may be, shall be final. The objector shall lodge with the Secretary of the tournament a fee to cover the expense of testing, and to discourage frivolous objections, which fee shall be returned to him if his objection be sustained, and in that case the Secretary of the tournament shall recover said fee from the owner of the bowl or bowls before they are returned to him, and the competitor who used them shall be disqualified, and his opponent held as having won the tie.

[Note.—To facilitate the testing of bowls under the rule, the Association trusts that each constituent club of the Association will provide itself with a Standard Bowl, made and stamped by one of its officers. Competitors in a public tournament are recommended to have their bowls tested and stamped beforehand.]

3. *Markers*.—In single-handed tournaments one marker only shall act in each game. The marker may answer queries as to position of bowls and their distance from the jack, but shall not give directions to, nor consult with, either player as to the play. Markers shall be appointed by the Directors of the tournaments, Local Secretaries, or Umpires, whom failing, by the Competitors themselves.

III.—SIZE OF THE JACK.

The Jack shall be about 2 1-2 inches in diameter.

IV.—CONDITIONS OF A GAME.

1. A game may consist of any number of shots or heads, or may be played for any length of time, as previously agreed upon.

2. When a match consists of more than one rink on each side, the total scores of the respective parties shall decide the contest.

3. When a game consists of a stated number of heads, and there is only one rink on each side, should it be found when the given number of heads had been played that the scores are equal, one extra head shall be played so as to decide the contest, and should the extra head result again in a tie, one more shall be played.

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V.—RINK OR TEAM OF PLAYERS.

1. A rink or team shall consist of four players, each playing two bowls, and called respectively, according to the order in which they play, leader or lead, second player, third player, and skip or driver. Unless otherwise mutually agreed upon, it shall be determined by tossing or by playing a trial head, which party is to play first, the winner of the toss or the head to have the choice. In all subsequent heads the party which won the previous head shall play first. The leaders play their two bowls alternately, and so on, each pair of players in succession to the end. The order of playing shall not be changed after the first head has been played. No one shall play until his opponent's bowl has ceased to run; a bowl so played may be stopped, and sent back to be played over again.

2. A bowl played by mistake shall be replaced by the player's own bowl.

3. When a player has played before his turn, the opponents may stop the bowl in its course, or allow it to remain when it comes to rest, or cause it to be played over again in its proper order. If it has moved either jack or bowls, the opponents shall have the power to cause the end to be begun anew.

4. No player shall change his bowls during the game, except with the consent of the opposing party.

5. If less than three players appear on either side, the game, so far as that rink is concerned, shall not proceed, and the rink with which this occurs shall be held as having *failed to appear*, and shall forfeit the game. Should such forfeiture take place where more rinks than one from each club are concerned, and where the aggregate or average scores are to decide the contest, the scores of the remaining rinks only shall be counted, but such average shall, as a penalty in the case of the defaulting club, be arrived at by dividing the aggregate score by the number of rinks which should have played, and not, as in the case of the other club, by the number actually engaged in the game. In the absence of a single player, from one or both sides, in an ordinary club match or friendly game, the number of bowls shall be made up by the party or parties playing odd bowls, these odd bowls being played by the first and second players. In a match for a trophy or other prize, where more rinks than one from each club are engaged, odd bowls may, in the absence of one of the players of any rink, be played in the manner above provided, but one-fourth of the total shots gained by such rink shall be deducted from its score at the end of the game. In a match for a trophy or other prize where a club is represented by only one rink such rink must play with four men, but should only three men appear on one of the sides, the whole details of the case shall, unless an amicable arrangement be made for another date within the authorized limit of time, be reported by the umpire to the Local Secretary, who shall, in turn, report them to the Secretary of the Association. The Secretary of the Association shall then call a meeting of Committee to dispose of each such case on its merits.

VI.—SKIPS OR DRIVERS.

1. The skips shall have sole charge of their respective rinks, and their instructions must be obeyed by the other players.

2. The skip shall have the control of the play, but he may delegate this duty at any time to a substitute, who is usually the third player.

3. As soon as a bowl is greened, the director must retire behind the jack.

4. The players not engaged must stand *jack-high*, or behind the mat-line.

5. The last player should remove the mat to the bank.

6. The two skips shall be judges of all disputed points, and, when they agree, their decision shall be final; if they cannot agree, the point shall be decided by the umpire previously appointed, whom failing, by a neutral person mutually chosen.

VII.—THE CLOTH OR MAT.

1. Each player, when playing, shall stand with at least one foot on the mat.

2. The mat shall, at the first head, be placed by the leader of the party which is to play first, and in every subsequent head by the leader of the party which lost the previous head; but it shall be in the option of the winner of any head to have the mat laid at the place where the jack lay, or between it and any point backwards not less than one yard from the ditch, the mat in any case being placed in the centre of the rink. In starting play, or when the jack at the finish of a head lies in the ditch, or less than one yard from it, the mat shall be placed forward to about that distance. The mat shall not be moved till the head is finished, but if moved by accident or inadvertently, it shall be replaced as near its original position as possible. It is recommended that the size of the mat be 22 by 14 inches or thereby.

VIII.—THROWING THE JACK.

1. The leader of the party which is to play first shall throw the jack.

2. If the jack run into the ditch at the first throw in a game, it shall be placed two yards from it. If it be thrown into the ditch at any subsequent head, the opposing party shall have the option of throwing it anew, but not of playing first. When thrown less than two yards from the ditch, it should be moved out to that distance.

3. The jack shall be thrown not less than 25 yards from the mat, and if it

run to one side it shall be moved straight across and placed in the line of the pins numbering the rinks. If it be thrown less than 25 yards, it shall be treated according to the rule applicable to a jack thrown into the ditch after the first head. (See Clause 2 of this Rule.)

4. If none of the foregoing rules have been transgressed, the jack shall be played to wherever it has been thrown; or, if moved, it must be by mutual consent of parties.

5. After having been played to, it shall not be touched or interfered with in any manner otherwise than by the effects of the play, until the result of the head has been determined.

IX.—MOVEMENT OF THE JACK AND OF BOWLS.

1. If the jack be driven into the ditch, within the limits of the rink, its place shall be accurately marked, but it shall not be removed from its place (either on to the green or elsewhere), except by a toucher (see Rule XII, section 5). Should it be driven beyond the limits of the rink, that is to say, over the bank, or past the side-boundary of the rink by a bowl in play, it shall be counted dead; but if moved by a bowl out of play, it shall be restored to its place.

[Note.—A bowl played or driven to the ditch which is not a toucher, shall, when it falls into the ditch, be out of play.]

2. The foregoing rule as to being counted dead when driven beyond the limits of the rink shall likewise apply to bowls, whether they be *touchers* or not, but neither jack nor bowl shall be counted dead unless it be *wholly* outside the boundary when it comes to rest, even though it may have been so in its course.

3. A bowl when "dead" must be at once removed to the bank. Whenever the jack is "dead" the head must of necessity be played over again, and it shall in no case be counted a played head, not even though all the bowls have been played.

4. The jack (though driven to the side of the rink, if not beyond its limits), may be played to on either hand, but any bowl played to it, which, when it has come to rest, lies wholly outside the rink, shall be counted dead.

5. In the event of the jack being broken, the head shall be begun anew.

X.—JACK OR BOWL REBOUNDING.

1. Should the jack run against the bank or a bowl in the ditch, and rebound on to the green, or after being played into the ditch it be so operated upon by a toucher as to find its way again on the green, it shall be played to in the same manner as if it had never been moved. But a bowl similarly rebounding shall, *unless it be a toucher*, be counted dead, and any bowl or jack moved thereby shall be put back to its former position.

XI.—JACK OR BOWL BURNED.

The term "burned" is applied to a jack or bowl which has been interfered with or displaced, otherwise than by a bowl in play.

Jack Burned.

1. *While in motion on the green.*

When a jack while in motion on the green is burned: (a) By one of the players, the opposing party shall have the option of letting it lie where it stops, and playing the head out, or of beginning the head anew. (b) By a neutral person, or by a bowl belonging to a neutral person, the parties shall come to an agreement as to its position, otherwise the head shall be begun anew.

2. *While in motion in the ditch.*

Bowls in the ditch which are not touchers should be immediately removed to the bank (see Rule XIII.), but in the event of an omission to remove them the jack or touchers coming in contact with them shall be allowed to lie where they rest. In such a case, these bowls should then be removed to the bank.

3. *While at rest.*

When a jack while at rest on the green is burned: (a) By one of the players, the opposite party may replace it in its original position, or allow it to remain as moved. (b) By a neutral person, or by a bowl belonging to a neutral person, the parties shall come to an agreement as to its position, otherwise the head shall be begun anew.

4. *While at rest in the ditch.* (See Rule IX, section 1.)

Bowl Burned.

1. *While in motion.*

A. When a bowl, during its original course, and before it has passed the jack, is burned: (a) By the party to whom it belongs, it shall be counted dead. (b) By an opponent, the player's party may claim to have it played over again, or to let it lie where it rests, or to have the head begun anew. (c) By a neutral person, it shall be played over again.

B. When a bowl which, in its original course, has passed the jack and, being still in motion, is burned: (a) By the player's own party, it shall be counted dead, whether it has touched the jack or not. (b) By an opponent or a neutral person, the player's party may choose to let it lie where it comes to rest, or to have the head begun anew.

C. When a bowl which had come to rest is afterwards set in motion by a bowl in play, and while still moving, is burned: (a) By the party to whom it belongs,

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it shall be counted dead. (b) By an opponent, the party to whom it belongs may choose to let it lie where it comes to rest, or place it where they think it would probably have rested had it not been interfered with. (c) By a neutral person, it may be allowed to lie, or be placed to the mutual satisfaction of parties; where agreement cannot be attained, the head shall be played over again.

2. *While at rest.*

When a bowl while at rest is burned: (a) By either party, it may be replaced by the opposite party, or in the latter's option be allowed to remain where it lies. (b) By a neutral person, or by a bowl not in play, it should be replaced as near its original position as possible.

XII.—TOUCHERS.

1. A bowl which touches the jack during its original course on the green, although previously it may have also touched one or more bowls, is called a *toucher*, and counts in the game wherever it rests if on the rink, but should a bowl, after it has ceased running, fall over and touch the jack, *after another bowl has been delivered*, it is not to be accounted a toucher. No bowl can in any circumstances become a toucher when the jack is in the ditch.

2. If a toucher run into the ditch when played, or be driven into the ditch during the course of the subsequent play, the place where it rests shall be marked, but its position shall not be altered except by the action of another toucher or the jack.

3. A toucher must be distinguished by a chalk or other distinct mark. Unless it be marked before the second succeeding bowl is delivered, it is not to be accounted a toucher. If the mark be not removed from the bowl before it is played in the succeeding head, it may be regarded as a *burned bowl*, and be removed to the bank.

4. If a bowl be moved *outwards* from the jack while being marked, it must remain as it is; but if moved *towards* the jack it must be restored to its original position.

5. Touchers may act on the jack or touchers in the ditch.

XIII.—DITCHERS.

1. A bowl which does not touch the jack in its original course on the green, and runs against the bank or into the ditch, or is driven into the ditch by the effects of the play, is called a *ditcher*, and must be immediately removed to the bank.

2. Should a ditcher under any circumstances return to the green, it must be placed on the bank.

XIV.—POSSESSION OF THE RINK.

1. As soon as each bowl stops running, the possession of the rink is transferred to the other party, time being allowed for marking a toucher.

2. The party in possession of the rink for the time being must not be disturbed or annoyed by their opponents.

XV.—RESULT OF HEAD.

1. When the last bowl in a head stops running, half a minute shall elapse, if either party so require, before the shots are counted.

2. Neither jack nor bowls shall be moved until both parties are agreed as to the shots.

3. If a bowl requiring to be measured is resting on another bowl, which prevents its measurement, the best means available shall be taken to secure it in its position, whereupon the other shall be removed. The same course shall be followed when more than two bowls are involved.

4. No measuring shall be allowed until the head has been played out.

5. When at the conclusion of a head a tie for the first shot occurs, it shall, in a game of ends, be counted a played head.

6. The duty of keeping the score, and of announcing the state of the game at the end of each head, should be assigned to the second player.

XVI.—OBJECTS ON THE GREEN.

1. Under no circumstances is any object to be laid on the green, or on a bowl, or on the jack, but it may be displayed in the hand for the guidance of the player.

XVII.—ONLOOKERS.

1. Persons not engaged in the game must confine themselves to the banks, and preserve an attitude of strict neutrality.

GAME OF POINTS.—RULES.

1. The game shall consist of 32 shots, viz., 8 each at *drawing*, *guarding*, *trailing*, and *driving*. It shall be played in two rounds of the green, 4 shots at each point, and bowls shall be played on the fore and back hand alternately.

2. Ties shall be decided by playing two shots, one on the fore, and one on the back hand, at each point.

3. Each player shall use four bowls, and no change of bowls shall be permitted.

4. Before commencing, each player shall be allowed two trial shots at *drawing*, one on the fore, and one on the back hand.

5. A marker shall be appointed to take charge of each rink, and it shall be the duty of the marker to declare the value of each shot, when the bowl comes to rest, to enter the same in a book or form ruled for the purpose, and when each player's shots are finished, to declare the result.

6. An umpire shall be chosen before play begins, and he shall decide finally all disputes that may arise.

7. No interference with the marker shall be allowed, and any dispute as to the value of a shot shall be referred to the umpire.

8. When play is finished, the markers shall hand in their scores to the secretary of the match, who shall enter each score in a book or sheet, ascertain the total score of each competitor, and declare the result as soon as possible, in presence of the player.

9. In the points game, Rule XI of the Laws of the Game shall not apply.

SCORING.—THE HIGHEST POSSIBLE SCORE IS 96 POINTS.

DRAWING.—If a bowl, having passed outside without touching either of the two bowls placed on the rink, rest within three feet of the centre pin or tee, it shall score 1, if within two feet it shall score 2, and if within one foot it shall score 3.

GUARDING.—If a bowl come to rest on the centre space it shall score 3 points, if on either of the two next it shall score 2 points, and if on either of the outermost it shall score 1 point.

The jack in front shall be temporarily lifted should a bowl played be thought likely to touch it, and thereby be affected in its destination. A bowl which touches the jack which is being guarded, shall not count.

TRAILING.—If a bowl trail the jack through between, and past the line square to the back of, the stationary bowls, it shall score 3, provided both jack and bowl be entirely over said line.

If a bowl trail the jack past, but do not itself entirely cross the said line at back of bowls; or if it trail the jack past the line in front and not over the line at back, but itself cross the back line, it shall score 2.

If a bowl pass between the jack and either of the stationary bowls over the back line without having touched the jack; or having touched it, do not carry it over the front line, but itself pass over the back line; or if it trail the jack over the front line though it do not itself cross it, it shall score 1.

No score shall be made if the jack, though touched, be not trailed clear over the front line or the bowl played do not cross the back line.

In all these provisions it must be understood that the bowl played must not touch either of the stationary bowls, and that neither the jack when trailed nor the bowl played shall travel outside the semi-circle.

DRIVING.—If a bowl drive the jack to the ditch through between the two bowls, it shall score 3.

If a bowl shift the jack, without carrying it through between the two bowls to the ditch, it shall score 2.

If a bowl touch the jack without shifting it or pass between the jack and either of the two bowls it shall score 1.

In all these provisions the bowl played must not touch either of the two bowls on the green and must itself run into the ditch.

Note.—No bowl is to be held as outside any circle or line unless it be entirely clear of it. This may be ascertained by looking perpendicularly down upon it or placing a square on the green. In the case of guarding, the whole thread must be visible to the eye of the marker, standing at either end of it.

BOXING.

BY

WILLIAM J. HERRMANN, INSTITUTE OF PHYSICAL TRAINING,
PHILADELPHIA.

AS an exercise boxing remains unsurpassed, principally because every muscle of importance is brought into action without any undue strain, exercising the body while pleasantly occupying the mind and improving quickness of observation and decision, instilling courage and confidence, instead of timidity, and presence of mind and self-control when most needed. It has a decided advantage over ordinary routine methods of physical training; something more than a mere mechanical movement is necessary, or else the exercise will become simply a repetition of dull monctony,

reluctantly engaged in and gladly dispensed with after a short trial.

Aside from developing the muscles it fosters and develops pluck, determination, coolness, and nerve, and imparts health, strength, speed, agility, and muscular control, besides being a splendid training for the eye and hand and a school for the temper.

Every man should be able to use the weapons given him by nature to the best of his ability, not to injure or maim, but to defend himself in case of need or oppression on the part of others. The advantage, utility, and confidence gained from a knowledge of the manly art of boxing are unquestioned. It imparts to the body and countenance an appearance of healthy vigor and can be practised at all seasons of the year and does not require an expensive outlay.

Do not labor under the delusion that a knowledge of self-defence leads a man to be pugnacious and to abuse his abilities; for experience demonstrates that the best boxers are generally men of great forbearance on provocation, and that a good knowledge of self-defence does not necessarily render a man quarrelsome, but rather forbearing.

Physical education and training are a necessary and admirable part of general education; proper instruction in physical training is as necessary as mental instruction in the intellectual pursuits, and results are as exact. Boys should be taught how to cultivate the body as well as the mind, to breathe properly as well as to calculate, that strength will surely follow exercise as knowledge will follow study.

Courage, confidence, strength, agility, grace, and the manly and moral virtues can only be secured by the practice of exercises which demand these qualifications to secure excellence. Training in manly exercises under competent instruction will often change a boy inclined to be soft and effeminate into a sturdy, plucky, manly, and enduring lad.

The efforts made to emulate manly prowess, the practice of self-denial necessary to insure success, not only improve the physical tone, but raise the much desired moral standard, and guide it in the right direction, as nothing else can do, besides bringing into play so many necessary qualities which constantly figure and are a necessity in every-day life. The strength, confidence, ability, physical and moral qualities gained will materially aid one to safely bear the strains and competitions that condition success in modern city life.

BY MAURICE MAETERLINCK

The Famous Belgian Author.

THE study of boxing gives us excellent lessons in humility and throws a somewhat alarming light upon the forfeiture of some of our most valuable instincts. We soon perceive that in all that concerns the use of our limbs—agility, dexterity, muscular strength, resistance to pain—we have sunk to the lowest rank

of the mammals or batrachians. From this point of view, in a well-conceived hierarchy, we should be entitled to a modest place between the frog and the sheep.

The kick of the horse, the butt of the bull, the bite of the dog, are mechanically and anatomically perfect. It would be impossible to improve by the most learned lessons their instinctive manner of using their natural weapons. But we, the "hominians," the proudest of the primates, do not know how to strike a blow with our fist. We do not even know which exactly is the weapon of our kind.

Look at two draymen, two peasants, who come to blows; nothing could be more pitiable. After a copious and dilatory broadside of insults and threats they seize each other by the throat and the hair, make play with their feet, with their knees, at random, bite each other, scratch each other, get entangled in their motiveless rage, dare not leave go, and if one of them succeeds in releasing an arm he strikes out blindly and most often into space a series of hurried, stunted, sputtering little blows; nor would the combat ever end did not the treacherous knife, evoked by the disgrace of the incongruous sight, suddenly, almost spontaneously, leap from the pocket of one or the other.

On the contrary, watch two pugilists; no useless words, no groppings, no anger; the calmness of two certainties that know what lies before them. To the spectator the athletic attitude of the guard, one of the finest of the male body, logically exhibits all the muscles of the organism to the best advantage.

From head to foot, no particle of strength can now go astray. Each single one has its pole in one or other of the two massive fists charged to the full with energy. Three blows, no more, the fruits of secular experience, mathematically exhaust the thousand useless possibilities hazarded by the uninitiated. Three synthetic, irresistible, unimprovable blows.

He who knows the source of justice which he holds in his two closed fists has no need for self-persuasion. Once and for all he knows; longanimity emanates like a peaceful flower from his ideal but certain victory. The grossest insult cannot impair his indulgent smile.

Peaceably he awaits the first act of violence, and is able to say to all who offend him: "Thus far shall you go and no farther." A single magic movement stops the insolence. Why make this movement? He ceases even to think of it, so certain is its efficacy.

AMATEUR ATHLETIC UNION RULES.

RULE 1.—In all open competitions the ring shall not be less than 16 feet nor more than 24 feet square, and shall be formed of 8 stakes or ropes, the latter extending in double lines, the uppermost line 4 feet from the floor and the lower line 2 feet from the floor.

RULE 2.—Competitors to box in regulation athletic costume, in shoes without spikes, or in socks, and to use boxing gloves of not more than 8 ounces in weight.

RULE 3.—Weights to be: Bantam, 105 lbs. and under; Feather, 115 lbs. and under; Light, 135 lbs. and under; Welter, 145 lbs. and under; Middle, 158 lbs. and under; Heavy, 158 lbs. and over.

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RULE 4.—Any athlete who weighs in and then fails to compete, without an excuse satisfactory to the Games Committee, shall be suspended for six months. All weighing in shall cease as soon as the first bout of the tournament on each night is commenced.

RULE 5.—In all open competitions the result shall be decided by two Judges, with a Referee. A Timekeeper shall be appointed.

RULE 6.—In all competitions the number of rounds to be contested shall be three. The duration of rounds in the trial bout shall be limited to three minutes each. In the "finals" the first two rounds will be three minutes each and the final round four minutes. The interval between each round shall be one minute.

RULE 7.—In all competitions any competitor failing to come up when time is called shall lose the bout.

RULE 8.—Immediately before the competition each competitor who has weighed in shall draw in person his number and compete as follows: Have a preliminary round of as many contests as the total number of contestants can be divided by two. In case any contestant does not compete in the preliminary series, he shall be allotted a number in the next series of bouts, so as to avoid the possibility of again drawing a bye. This leaves 2, 4, 8 or 16 contestants, and the rounds then proceed regularly without byes or uneven contests.

RULE 9.—Each competitor shall be entitled to the assistance of two seconds only, and no advice or coaching shall be given to any competitor by his seconds or either of them, or by any other person during the progress of any round. For a violation of this section the referee may disqualify the competitor who is so advised or coached.

RULE 10.—The manner of judging shall be as follows: The two judges and referee shall be stationed apart. At the end of each bout each judge shall write the name of the competitor who in his opinion has won, and shall hand the same to the announcer (or master of ceremonies). In case the judges agree, the master of ceremonies shall announce the name of the winner; but in cases where the judges disagree, the master of ceremonies shall so inform the referee, who shall thereupon himself decide.

RULE 11.—The referee shall have power to give his casting vote when the judges disagree, to caution or disqualify a competitor for infringing rules, or to stop a round in the event of either man being knocked down, providing that the stopping of either of the first two rounds shall not disqualify any competitor from competing in the final round to decide the competition in the event of either man showing so marked a superiority over the other that a continuation of the contest would serve only to show the loser's ability to take punishment. And the referee can order a further round, limited to two minutes, in the event of the judges disagreeing.

RULE 12.—The decision of the judges or referee, as the case may be, shall be final.

RULE 13.—In all competitions the decision shall be given in favor of the competitor who displays the best style and obtains the greatest number of points. The points shall be: For attack, direct clean hits with the *knuckles* of either hand, on any part of the front or sides of the head, or body above the belt; defence, guarding, slipping, ducking, counter-hitting or getting away. Where points are otherwise equal, consideration to be given the man who does most of the leading off.

RULE 14.—The referee may disqualify a competitor who is boxing unfairly, by kicking, or hitting with the open glove, by hitting with the inside or butt of the hand, the wrist or elbow, hitting or catching hold below the waist, or hitting when down (one knee and one hand or both knees on the floor), butting with the head or shoulder, wrestling or roughing at the ropes, using offensive and scurrilous language, or not obeying the orders of the referee.

RULE 15.—The contestant who has last been defeated by the winner shall receive second prize; and all who have been beaten by the winners of either first or second place shall be entitled to compete for third place.

RULE 16.—Any athlete who competes in a boxing contest of more than four rounds shall be suspended for such stated period as may be determined by the Board of Managers of the Association of the Amateur Athletic Union in whose territory the offence was committed.

RULE 17.—In the event of any question arising not provided for in these rules, the referee to have full power to decide such question or interpretation of rule.

PREPARATION FOR CAMPING OUT.

BY

HOWARD HENDERSON.

NOTE.—Camping out is one of the most healthful ways of spending a vacation, and may be made one of the most inexpensive as well, though of course the expense depends on how much of roughing it and absence of luxury the campers are willing to put up with. Mr. John M. Gould, in his book on "How to Camp Out," relates that three boys, including himself, once went on a twelve days' camping trip and spent but one dollar apiece during that time. They "carried coffee, sugar, pork, and beef from home, and ate potatoes three times a day." Frank E. Clark, in an account of three weeks' camping on the seashore, gives the following list of expenses for six persons:

Tent for three weeks	\$ 9.00
Provisions taken with us	22.00
Stove and cooking utensils	15.00
Fresh provisions bought at the beach	15.00
Incidentals	20.00
Total	\$81.00

or \$4.50 per week for each camper.

The camper-out will know what to do when he sees this notice on a farmer's fence: "Any person entering these inclosures will be shot and prosecuted." Or, at the entrance to a wood: "No Gunners Allowed Here."

A RECENT writer has well said that the genuine camper divides the year by the 1st of January. Up to that time his talk is all about the last camp he had, and after that it is all of the next camp. The old adage "Seize time by the forelock, for he is bald behind," applies as well to pleasure as to business. Double is the enjoyment to the lover of woodland life if he knows weeks ahead just when, and just where, he is going to spend his vacation. Nor can he too early in the season look over and perfect his kit. Many an hour's dearly bought pleasure has been marred by simply not preparing in time. The camper should always bear in mind that homely phrase, and "get a good ready." Make out a full inventory of all you have on hand which you may want for the next vacation. Put down everything; not only usual cooking utensils, clothing, tent, and fishing tackle, but also the little odds and ends of things, such as a chain, a hook, a piece of wire, etc. Often these little trifles prove a most valuable part of your inventory. Put down each article in a line by itself. Do not jumble three or four items together. Having completed your inventory, make out a supplementary inventory of all those things which past experience has taught you the necessity of, or which you think you require, and you have not already on your list. Leave nothing to memory; put every article down. Next read everything you can find referring to camping; and especially is this important if you are a novice, for good camping is an art to be acquired only by experience and careful attention to every detail. One man will have twice the comfort, twice the pleasure, and at one-half the expense, that another man will,

From "Practical Hints on Camping," by Howard Henderson, Chicago; Jansen, McClurg Co. Copyright by Howard Henderson; by permission.

simply by knowing how to camp. As you read, make notes, and add to your supplementary inventory such articles as you find you have overlooked.

Examine your lists carefully and strike out everything you think you can get along without. Simplicity should be your constant aim. Dispense with all the requirements of city life as far as possible. If you are inexperienced, you probably will find after one or two seasons out, that of the articles you took with you into the woods the first time, you could have left two-thirds of them at home, and still have been very well provided.

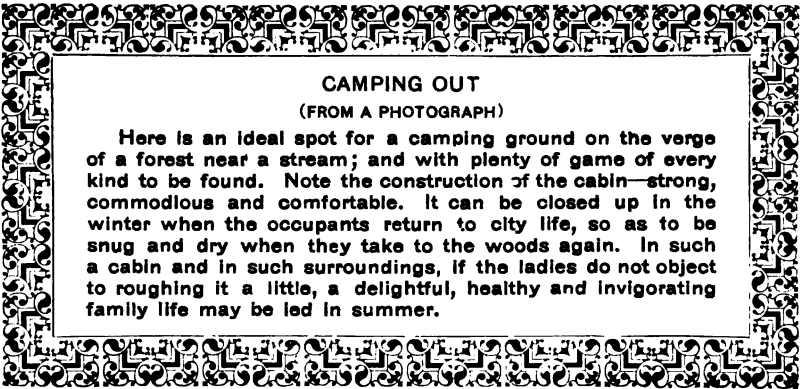
While accumulating information, decide how you are going to carry your things. Much of your stuff can be packed as well at once as later. Often the first care of an old camper after his return, is to put everything in order for the next season. Every article relating to camp life, except perhaps clothing, should be kept by itself. How to pack is a problem each must settle for himself. Boxes with hinged covers will be found very useful, though perhaps good strong trunks are better than anything else. They are more easily handled in camp, and go as personal baggage en route; thus obviating the necessity, at times, of sending part of your kit ahead by freight. You will find it convenient to know the weight of each piece of baggage, and it will assist you in making future plans.

Travel as light as possible, but be sure you have sufficient clothing and bedding to keep warm. A heavy double blanket, and two rubber blankets, one beneath you and one over you, will generally be found sufficient for the night. Besides usual clothing you should have one suit of light summer, and one set of heavy winter underwear. A light flannel wrapper, or vest, should always be worn.

Provisions should be packed entirely by themselves. Do not undertake to do it yourself, even for small purchases. Go to some large grocery house, and the packer will put up your things neater and better than you can. They will furnish a suitable box, and see that it is properly marked. You can also generally obtain from them a printed price-list, which you will find advantageous in helping you decide what you want. But—beware—take care—make it a condition precedent to your purchase that you are to oversee the wrapping up of every package, and to check off yourself every article as it is put in the box. Be not deceived by any assurances whatever. This is important, and something you must attend to yourself. It is no slight matter to be from ten to forty miles from a settlement and find you are minus the fish-sauce, or that the pepper or salt has been forgotten. Have everything double wrapped. Better still, use small bags. Coin bags of different sizes, such as bankers use, will be found for many things very convenient. Do not forget to ask for an old meal bag. It is one of the most serviceable articles in camp. Take a bill of your purchases, and examine it carefully and preserve it. Old grocery bills are frequently valuable to refer to.



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CAMPING OUT

(FROM A PHOTOGRAPH)

Here is an ideal spot for a camping ground on the verge of a forest near a stream; and with plenty of game of every kind to be found. Note the construction of the cabin—strong, commodious and comfortable. It can be closed up in the winter when the occupants return to city life, so as to be snug and dry when they take to the woods again. In such a cabin and in such surroundings, if the ladies do not object to roughing it a little, a delightful, healthy and invigorating family life may be led in summer.

Provisions can be left to the last, but all other purchases should have been completed days before. Allow ample time for every preparation. Do not fly around town the last morning like a decapitated hen. You will find enough to annoy one in camp; and you should start out as calmly and quietly as you go down to your business.

A cheap flexible blank book, which can be carried in the side pocket, will be found very convenient. It should be of about twenty-four pages, the ruling narrow, and the page wide. Such a book which came under our notice was filled out as follows:

INVENTORY OF ARTICLES BELONGING TO A. B.

Clothing.

Camp Equipage.

Hunting Outfit.

Fishing Tackle.

Under this last head were enumerated the different lines, giving size and length of each, the number of hooks, and sizes; the number of flies, giving the kind, size, color, and price of each, etc., etc.

Miscellaneous Articles.

Private Expense Account.

Expenses in Common.

Memorandum.

Left.....on a camping expedition.....189..at....o'clock
 . M., via..... Party numbers..... as follows:
 Reached camp at....o'clock . M., on the....day of....., 189...
 Broke camp..... Reached home....., 189... Time ab-
 sent..... Total cost of trip, \$.....

NOTES.

Here follow various entries; such as notes of travel, observations, practical hints, a running diary of the trip, etc.

Such a book, by properly checking off the inventory, may last for two or three seasons; or if preferred you can get a new one each year for a few cents, and thus have an interesting volume relating to each expedition.

Avoid dressing "loud." Buy a cheap suit, or better still, wear your old clothes. Dark colors are preferable, being less liable to attract the attention of game, and easier to take care of. Rubber boots, except for ladies, are not recommended. For rubber blankets take the government poncho. It will be found very convenient. A rubber coat is very serviceable at times, but is not indispensable. Boots should be very easy, and take along an old pair of slippers. A hammock will be found enjoyable. A cheap one will do, but do not take the smallest adult size; it is not quite large enough for real comfort.

Be sure you take with you a large stock of patience and good nature. Camping out tests the character. A good camper accommo-

dates himself to circumstances, and is too much of a philosopher to condescend to quarrel. Make no rules, if you can avoid it, and break none that are made. If you are appointed a leader, shift the office upon the shoulders of another man if you can; and if not, then govern by tact and quiet influence, rather than by arbitrary regulations.

SCHOOL CRICKET.

BY

THE HON. R. H. LYTTELTON.

[As Cricket is a game of purely English origin, the National Game of Englishmen—although it has now become thoroughly at home in this country, and is growing in popularity—we have thought it well to go to an English source for an article on the subject. The English point of view is interesting, and suggestive; and it illustrates the thought which underlies the famous phrase, "The Battle of Waterloo was won on the playing grounds of Eton College."]

YOUTH is the time to learn and to be taught, in cricket as in everything else—how and what to teach is in every case entirely dependent on the boy. Some will never be taught; there is something wrong; hand and eye never can be made to agree. On the other hand there are others, very few in number, who want practically no teaching; they see the ball, judge its length, and play accordingly. My own belief is that if you were but to ask Mr. Mitchell of Eton—and the late I. D. Walker would have said the same—"What did you teach Maclaren, Jackson, Forbes, Ottaway, and a few more?" he would have replied: "Nothing; the right principles were born in them, all they required was practice, and not half as much of this as boys of less skill." A little advice on matters that experience alone can give, such as judging a run or the peculiarities of a sticky wicket, may be given with advantage.

I have heard it said of a wonderfully successful headmaster—successful I mean in his boys getting scholarships—that his success is the result, not as may be imagined of his own teaching of the sixth form, but of his practice of taking classes and prowling about among the lower forms. This master had an eye, and an unerring eye, for youths who were likely to become scholars. He caught these boys when young and taught them himself, and in due time he passed them on to his most learned and experienced masters to be finished; they had the scholarship gloss put on them, and University rewards poured down. It might be the same, I believe, if a master or some other coach who had the same gift, could, by observing lower boy cricket, spot the boy who had cricket in him. Such a boy need not be taken away from his surroundings, but there are sundry hints that may be given him. If he is a fast bowler and is left to himself he will probably overbowl himself; it may then be possible to prevent

From Outdoor Games—Cricket and Golf—London, J. M. Dent & Co.

this. I have known many an instance of a boy of fourteen or fifteen, a bowler of natural spin or break and very fairly accurate; but at seventeen or eighteen what is he? A bowler with tolerable length, but the spin and break are gone for ever. He has been overbowled, or perhaps he has got into a bad habit of bowling beyond his natural pace, or he has bowled in practice and tried tricks, or got into careless ways; all this may have been prevented by kindly advice, but in many cases this advice has not been given and a good bowler has been spoiled.

It is true of matured cricketers that temperament has a great deal to do with success. We all know cricketers whose play at the nets gives one hope of great things in matches, but the result falls far short of the promise. Such a boy wants encouragement, but not very much can come of this, and unless nature works some change, it is probable that such a boy will never develop into a really successful bat. He will play an occasional fine innings, but cannot be depended on. On the other hand, there are cricketers who appear at their best, the more important the match and the more critical the position. There appears to be some quality or gift in their constitution that can be pulled out when wanted, like an organ stop. Nobody is more aware of this than the player himself. I believe nervousness in a greater or lesser degree is common to all, but it is certain that while this affects some boys and men so as to discount much of their skill, in others it hardly affects their play at all. School cricket has every element of fun and enjoyment in it; the scoring is not too high, for the wickets are not always dead true; the hits, except in the school matches, are all run out, the spirits are elastic, and hope springs eternal in the boyish breast. The school hours have to be kept, and in the games there is not often continuous cricket for more than two to three hours, so there is none of the weariness that is the curse of the modern first-class cricket—the inevitable result of batting preponderance and bowling impotence.

THE CHARM OF CRICKET.

BY

F. H. BOHLEN,

Member of the Gentlemen of Philadelphia Team, 1897-1903.

CRICKET among team games not so expensive as to eliminate professionals, is at the same time the most amateur and the most democratic. While gentlemen and professionals play side by side the tone of the games is that of the gentleman, not of the professional. It is the proudest boast of cricketers that any attempt to obtain an advantage not sanctioned by the spirit as well

as the letter of the rules is met by the sternest disapprobation, and above all the decisions of the umpires are regarded as beyond open question, though it would be asking too much of human nature to demand that they should also be above private criticism. In addition the "Gentlemen" have in their annual matches beaten the "Players" almost if not quite as often as they have suffered defeat. Nor has it been exploited as a money-making business. While gate money is habitually charged at all the great matches it goes and has gone, save in a few exceptional instances, to the encouragement and support of the game itself, and not to the enrichment of its promoters. Cricket is like all games, the result of gradual evolution; though it has been played in its present form for over a hundred years, its history is intensely interesting; no game which requires as it does entire subordination of the individual to the side affording such opportunities for individual distinction. The great names of cricket are household words to-day throughout the British Empire. To describe the game or the mode of playing it within the limits of the article would be impossible. To even suggest its charm and variety to one who is not himself a player is a difficult task. To compare it to a game which all Americans know, cricket is like a novel of Thackeray—baseball like one by Gaboriau. The principal charm of the one is its style, though at times its plot may become absorbingly interesting; the other depends almost entirely upon its plot. In the one the main interest lies in method, in the other in action. The batsman in cricket must know and practise an infinite variety of strokes, and must vary these with the state of the ground and the position of the game. At one moment he must be cautious, at the next dashing—the strokes that will be most effective on a dry day will be fatal after a rain. The bowler must vary his attack as the condition of the pitch changes; he must adapt it to the personal characteristics of the batsman whom he opposes. It is in fielding perhaps that the cricketer appears to least apparent advantage, and yet even here there are opportunities for the utmost dexterity and accuracy. The fielder stands nearer to the striker than in any other game—to see the catches caught with one hand by the slips standing only a few feet from the batsman, when a fast bowler is bowling, is a revelation of the quickness of the human hand and eye. That during a long day's outing the fielding should sometimes become slack is only to be expected, but any one who has seen a good fielding side on edge when a few runs are required to win and one or two wickets to go down will realize how smart and alert cricket fielders can be. As a training for boys no game can equal it—it requires unselfish devotion to the success of the side and absolute self-control. Above all fair play and real sportsmanship are demanded on pain of ostracism, and it presents unrivalled opportunities for social intercourse and the formation of friendships based upon a common devotion to an historic, clean, and amateur sport.

LAWS OF CRICKET.

As Amended by the Marylebone C. C.

1. A match is played between two sides of eleven players each, unless otherwise agreed to; each side has two innings, taken alternately, except in the case provided for in Law 53. The choice of innings shall be decided by tossing.
2. The score shall be reckoned by runs. A run is scored 1st, so often as the batsmen after a hit, or at any time while the ball is in play, shall have crossed and made good their ground from end to end. 2nd, for penalties under Laws 16, 34, 41, and allowances under 44. Any run or runs so scored shall be duly recorded by scorers appointed for the purpose. The side which scores the greatest number of runs wins the match. No match is won unless played out or given up, except in the case provided in Law 45.
3. Before the commencement of the match two umpires shall be appointed, one for each end.
4. The ball shall weigh not less than 5 1-2 ounces, nor more than 5 3-4 ounces. It shall measure not less than 9 inches, nor more than 9 1-4 inches in circumference. At the beginning of each innings either side may demand a new ball.
5. The bat shall not exceed 4 1-4 inches in the widest part; it shall not be more than 38 inches in length.
6. The wickets shall be pitched opposite and parallel to each other at a distance of 22 yards. Each wicket shall be 8 inches in width and consist of three stumps, with two balls upon the top. The stumps shall be of equal and sufficient size to prevent the ball from passing through, 27 inches out of the ground. The balls shall be each 4 inches in length, and when in position on the top of the stumps shall not project more than 1-2 inch above them. The wickets shall not be changed during a match unless the ground between them become unfit for play, and then only by consent of both sides.
7. The bowling crease shall be in a line with the stumps; 8 feet 8 inches in length; the stumps in the centre, with a return crease at each end, at right angles behind the wicket.
8. The popping crease shall be marked 4 feet from the wicket, parallel to it, and be deemed unlimited in length.
9. The ground shall not be rolled, watered, covered, mown or beaten during a match, except before the commencement of each innings and of each day's play, when, unless the inside object, the ground shall be swept and rolled for not more than ten minutes. This shall not prevent the batsman from beating the ground with his bat, nor the batsman nor bowler from using sawdust in order to obtain a proper foothold.
10. The ball must be bowled; if thrown or jerked, *either* umpire shall call "No ball."
11. The bowler shall deliver the ball with one foot on the ground behind the bowling crease, and within the return crease, otherwise the umpire shall call "No ball."
12. If the bowler shall bowl the ball so high over or so wide of the wicket, that in the opinion of the umpire it is not within reach of the striker, the umpire shall call "Wide ball."
13. The ball shall be bowled in overs of *six* balls from each wicket alternately. When *six* balls have been bowled and the ball is finally settled in the bowler's or wicket-keeper's hands, the umpire shall call "Over." Neither a "no ball" nor a "wide ball" shall be reckoned as one of the "over."
14. The bowler shall be allowed to change ends as often as he pleases, provided only that he does not bowl two overs consecutively in one innings.
15. The bowler may require the batsman at the wicket from which he is bowling to stand on that side of it which he may direct.
16. The striker may hit a "no ball," and whatever runs result shall be added to his score; but he shall not be out from a "no ball," unless he be run out, or break Laws 26, 27, 29, 30. All runs made from a "no ball," otherwise than from the bat, shall be scored "no balls," and if no run be made, one run shall be added to the score. From a "wide ball" as many runs as are run shall be added to the score as "wide-balls," and if no run be otherwise obtained one run shall be so added.
17. If the ball, not having been called "wide" or "no ball," pass the striker without touching his bat or person, and any runs be obtained, the umpire shall call "Bye," but if the ball touch any part of the striker's person (hand excepted) and any run be obtained, the umpire shall call "Leg-bye," such runs to be scored "byes" and "leg-byes," respectively.
18. At the beginning of the match, and of each innings, the umpire at the bowler's wicket shall call "Play;" from that time no trial ball shall be allowed to any bowler on the ground between the wickets, and when one of the batsmen is out the use of the bat shall not be allowed to any person until the next batsman shall come in.
19. A batsman shall be held to be "out of his ground" unless his bat in hand or some part of his person be grounded within the line of the popping crease.
20. The wicket shall be held to be "down" when either of the balls is struck off, or if both balls be off, when a stump is struck out of the ground.
21. The striker is out if the wicket be bowled down, even if the ball first touch the striker's bat or person—"Bowled."

22. Or, if the ball, from a stroke of the bat or hand, but not the wrist, be held before it touch the ground, although it be hugged to the body of the catcher—"Caught."

23. Or, if in playing at the ball, provided it be not touched by the bat or hand, the striker be out of his ground, and the wicket be put down by the wicket-keeper with the ball or with the hand or arm, with ball in hand—"Stumped."

24. Or, if with any part of his person he stop the ball, which in the opinion of the umpire at the bowler's wicket shall have been pitched in a straight line from it to the striker's wicket and would have hit it—"Leg before wicket."

25. Or, if in playing at the ball he hit down his wicket with his bat or any part of his person or dress—"Hit wicket."

26. Or, if under pretence of running, or otherwise, either of the batsmen wilfully prevent a ball from being caught—"Obstructing the field."

27. Or, if the ball be struck, or be stopped by any part of his person, and he wilfully strike it again, except it be done for the purpose of guarding his wicket, which he may do with his bat, or any part of his person, except his hands—"Hit the ball twice."

28. Either batsman is out, if in running, or at any other time, when the ball is in play he be out of his ground, and his wicket be struck down by the ball after touching any fieldsmen, or by the hand or arm, with ball in hand, of any fieldsmen—"Run out."

29. Or, if he touch with his hand or take up the ball while in play, unless at the request of the opposite side—"Handled the ball."

30. Or, if he wilfully obstruct any fieldsmen—"Obstructing the field."

31. If the batsmen have crossed each other, he that runs for the wicket which is put down is out; if they have not crossed, he that has left the wicket which is put down is out.

32. The striker being caught, no run shall be scored. A batsman being run out, that run which was being attempted shall not be scored.

33a. A batsman being out for any cause, the ball shall be "dead."

33b. If the ball, whether struck with the bat or not, lodges in a batsman's clothing, the ball shall become "dead."

34. If a ball in play cannot be found or recovered, any fieldsmen may call "Lost ball," when the ball shall be "dead"; six runs shall be added to the score, but if more than six runs have been run before "lost ball" has been called, as many runs as have been run shall be scored.

35. After the ball shall have been finally settled in the wicket-keeper's or bowler's hand it shall be "dead"; but when the bowler is about to deliver the ball, if the batsman at his wicket be out of his ground before actual delivery, the said bowler may run him out; but if the bowler throw at that wicket and any run result it shall be scored "no ball."

36. A batsman shall not retire from his wicket and return to it to complete his innings after another has been in without the consent of the opposite side.

37. A substitute shall be allowed to field or run between wickets for any player who may during the match be incapacitated from illness or injury, but for no other reason, except with the consent of the opposite side.

38. In all cases where a substitute shall be allowed, the consent of the opposite side shall be obtained as to the person to act as substitute and the place in the field which he shall take.

39. In case any substitute shall be allowed to run between wickets, the striker may be run out if either he or his substitute be out of his ground. If the striker be out of his ground while the ball is in play, that wicket which he has left may be put down and the striker given out, although the other batsman may have made good the ground at that end, and the striker and his substitute at the other end.

40. A batsman is liable to be out for any infringement of the laws by his substitute.

41. The fieldsmen may stop the ball with any part of his person, but if he wilfully stop it otherwise the ball shall be "dead," and five runs added to the score. Whatever runs may have been made, five only shall be added.

42. The wicket-keeper shall stand behind the wicket. If he shall take the ball for the purpose of stumping before it has passed the wicket, or if he shall incommode the striker by any noise or motion, or, if any part of his person be over or before the wicket, the striker shall not be out, excepting under Laws 26, 27, 28, 29, and 30.

43. The umpires are the sole judges of fair or unfair play, of the fitness of the ground, the weather, and the light for play; all disputes shall be determined by them, and if they disagree the actual state of affairs shall continue.

44. They shall pitch fair wickets, arrange boundaries where necessary, and the allowances to be made for them, and change ends after each side has had one innings.

45. They shall allow two minutes for each striker to come in and ten minutes between each innings. When they shall call "Play," the side refusing to play shall lose the match.

46. They shall not order a batsman out unless appealed to by the other side.

N. B.—An appeal, "How's that," covers all ways of being out (within the jurisdiction of the umpire appealed to), unless a specific way of getting out is stated by the person asking.

47. The umpire at the bowler's wicket shall be appealed to before the other umpire in all cases except those of stumping, hit wicket, run out at the striker's wicket, or arising out of Law 42, but in any case in which an umpire is unable to give a decision he shall appeal to the other umpire, whose decision shall be final.

48. If either umpire be not satisfied of the absolute fairness of the delivery of any ball, he shall call "No ball."

48a. The umpire shall take especial care to call "No ball" instantly upon delivery, "Wide ball" as soon as it shall have passed the striker.

49. If either batsman run a short run, the umpire shall call "One short," and the run shall not be scored.

50. After the umpire has called "Over" the ball is "Dead," but an appeal may be made as to whether either batsman is out; such appeal, however, shall not be made after the delivery of the next ball, nor after any cessation of play.

51. No umpire shall be allowed to bet.

52. No umpire shall be changed during a match unless with the consent of both sides, except in case of violation of Law 51, when either side may dismiss him.

53. The side which bats first and leads by 150 runs in a three days' match, or by 100 runs in a two days' match, shall have the option of requiring the other side to follow their innings.

54. The inside may declare their innings at an end in a three days' match at or after the luncheon interval on the second day; in a two days' match on the second day, at any time; in a one day match at any time.

ONE-DAY MATCHES.

1. The side which bats first and leads by 75 runs shall have the option of requiring the other side to follow their innings.

2. The match, unless played out, shall be decided by the first innings. Prior to the commencement of a match it may be agreed: That the over consist of 5 or 6 balls.

N. B.—A Tie is included in the words "Played out."

SINGLE WICKET.

The laws are, where they apply, the same as the above, with the following alterations and additions:

1. One wicket shall be pitched, as in Law 6, with a bowling stump opposite to it at a distance of twenty-two yards. The bowling crease shall be in a line with the bowling stump and drawn according to Law 7.

2. When there shall be less than five players on a side bounds shall be placed twenty-two yards each in a line from the off and leg stump.

3. The ball must be hit before the bounds to entitle the striker to a run, which run cannot be obtained unless he touch the bowling stump or crease in a line with his bat, or some part of his person, or go beyond them, and return to the popping crease.

4. When the striker shall hit the ball, one of his feet must be on the ground behind the popping crease, otherwise the umpire shall call "No hit" and no run shall be scored.

5. When there shall be less than five players on a side neither byes, leg byes, nor overthrows shall be allowed, nor shall the striker be caught out behind the wicket, nor stumped.

6. The fieldsman must return the ball so that it shall cross the ground between the wicket and the bowling stump, or between the bowling stump and the bounds; the striker may run till the ball be so returned.

7. After the striker shall have made one run, if he start again he must touch the bowling stump or crease, and turn before the ball cross the ground to entitle him to another.

8. The striker shall be entitled to three runs for lost ball, and the same number for ball wilfully stopped by a fieldsman otherwise than with any part of his person.

9. When there shall be no more than four players on a side there shall be no bounds. All hits, byes, leg byes, and overthrows shall then be allowed.

10. There shall be no restriction as to the ball being bowled in overs, but no more than one minute shall be allowed between each ball.

CROQUET AND ROQUE.

BY

CHARLES JACOBUS, OFFICIAL EDITOR OF NATIONAL ROQUE ASSOCIATION.

AMONG the games that within a comparatively few years have merited and received the attention of people of all ages in this country, no one has been more simple, less open to objections, or likely to be attended with greater positive physical benefit than the game of croquet.

The very fact that it is an outdoor game, where the air is free and pure, where there is no such thing as what Henry Ward Beecher called "vaporous intimacy," has ever been an argument in its favor. Another argument is that it is by no means a game in which the violence of physical exertion, which in some other games is almost if not entirely unavoidable, is apt to bring any harm to those who engage in it.

The name seems to have a decidedly French flavor, and it is said that the game really did have its origin in France, but that it was across the channel in England that the game was placed upon a footing that the lapse of about half a century has only made more sure of lasting permanence.

Its introduction into the United States was followed by a widespread acknowledgment of its merits, and scarcely a lawn of any size or excellence did not have its equipment for the practice of this game.

About 1870, possibly because of the rage for bicycle exercise, there was a lull in the attention paid to croquet. Still it had come to stay, and the condition of affairs to-day warrants increasing interest in the game. Our English cousins pay more attention to the game at least from a public standpoint than we do, and their tournament gatherings are very frequent in the summer season, and all carefully scheduled and arranged so that the players of the United Kingdom have many places in which claims to supremacy may be tested.

The supreme care that the English lawns receive makes them superior to any other in the world for skill and excellence of play. All are familiar with the method of setting the arches or wickets in this country. But in England the placing of the arches is entirely different. This setting of the arches, however, is a mere matter of form, and the different methods of arrangement may be as various as the points of the compass, and yet each may preserve the salient features of the game, and call for the exhibition of the same qualities of skill and management.

Special Features.

One of the special features of croquet, in distinction from the great majority of outdoor amusements, is that it is one in which there is

opportunity for even extreme deliberation in the playing thereof. That is, when it becomes one's turn to play, a chance is afforded to take a survey of the situation, and thus determine not in a hurried way the best method of manipulating the rubber spheres. How different from lawn tennis, and from baseball! In lawn tennis, there is the necessity for instantaneous muscular response to the brain-formed plan of defensive or offensive play. There must be not the least hesitation, or the ball will be out of your reach. And thus the demands are more exhausting, and though all such features are enjoyed by the vigorous, those who should go slower cannot enjoyably take part in such games. And it is well that we have in croquet a source of pleasurable and healthful amusement that is so perfectly suited to those that would incur danger instead of receiving benefit, if this deliberate method of play were not a prominent feature thereof.

In playing this game, i. e., to insure excellence of play, certain qualifications are needed, without which, however, there may still be much pleasure and untold physical benefit. There are persons that can excel in no outdoor or even indoor game. Still all may improve their playing, by a careful observance of principles that tend to render difficulties most easily to be overcome.

I. If a player has an eye that can be trusted for accuracy in directing the blow or stroke of his mallet, this will afford the greatest cause for hopes of future success in the manipulation of the balls.

II. Then there is the desired feature of determining the *force* of the stroke as well as the direction of the balls, that enters so largely into the question of success. The hand must be trained with the eye. The eye for accurate observation; the hand for carrying out with material things a certain mentally formed plan of procedure.

III. *Generalship*.—It is really surprising how much opportunity is afforded in this quiet, recreative game for the display of management, or generalship. The battle is not to the strong. An accurate eye and a trained hand, without discretion in the disposition of forces and their management, will all be without avail against inferior forces with a high order of generalship. It is in fact a study at times to determine just how the contest on this mimic battlefield shall be waged. And those beginning will do well to watch and to study the methods of play in certain positions that experienced players adopt, as a means of strengthening their own game.

IV. Excellence or superiority of play requires sometimes, that, as in war, a player may strengthen his own position by placing his adversary in an adverse one. This is lawful. And one of the ways to do this is, while an opponent's ball (especially the so-called "danger-ball") is "in hand," to put it in such a position as to render that opponent incapable of harming him from sheer inability to play to advantage. This is done by hiding the ball behind a wire, and here is one of the strong features of successful play, viz., to be able, from different distances, to send a ball to some desired spot where

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little damage can be effected by any stroke. Then there is the jump shot, by which a ball may be made, from the peculiar method of striking the ball, to jump over some intervening ball or even arch.

Advantages of the Game:

Any exercise that brings one in close communion with nature, with her open tabernacle, her purest air, and all the varying moods and tenses she affords, will most certainly bring reward physically of a high order. But the change from office duties, where one is compelled to have not only his movements but also his source of pure air more or less limited by the condition of affairs, this change, we say, even of itself, to the open court of Nature, without any pleasurable exercise, would still be followed with much benefit. But with exercise attending, and that in which a healthful rivalry for supremacy may enter in as an additional factor, of course the product is thereby just so much the greater.

The game of croquet—and in fact all games to a certain extent, but croquet peculiarly so—affords an excellent opportunity to determine the make-up of a man either as victor in some hard-fought game or as he experiences defeat, or suffers harm from some ill-designed, and possibly worse executed stroke of his own. The varying moods and tenses (so to speak) of a man are here in this game clearly revealed, and the little foibles that mar one's personality, or the generous qualities, that so forcibly win approval, need no magnifying apparatus to make them conspicuous.

The advantages of the game are not alone, therefore, on the side of the physical. Does it seem strange to speak of a possible development of character along healthful lines, in connection with this game? It may, but we must in the last analysis, ascribe the same thing to other games, but not, we think, to the same extent as in this one that we are considering. In fact, all businesses, sports, all idle moments are more or less revelatory or formative as to character elements. Inability to restrain one's self under circumstances provoking one to unseemly word or deed is, in this gentle game, apt to be gradually overcome, and that princely characteristic, "fair play," shines out in this as in other games.

We have heard veterans in the game speak of the valued friendships formed, of hospitalities offered and accepted, and once when the writer of this article was visiting a lovely home, with the "olive branches" about the table, our host pointed to the mistress of the family and said, "You see what croquet has done for me." So that its influences go beyond the limits of the physical, beyond the uplifting features of healthful development, and take deep hold of and strengthen, or even form, the tenderest ties of humanity. We drop this word of friendly advice to beginners especially: "Let every movement be one of fairness and honor. Let your adherence to the strict letter of the rules be observed in all cases of even the greatest inter-

est. Let not self-interest mount so high as to warp your judgment, and especially let the little acts of comity and courtesy be sprinkled in among even the most difficult plays so as to realize outside of, and away from, what any expertness may bring, the richer fruits of pleasant though possibly intensely rivalling companionship."

Development of the Game.—Croquet was primarily, and in the vast majority of instances is to-day, essentially a *lawn game*. As the game made progress in excellence of play, and as it received the attention of thoughtful minds, the question of accuracy in playing came to the front and led to perfecting of the surface of the grounds. Lawns prepared with the greatest care, and sodded and made as level as possible took the place of the ordinary lawn, with its irregularities of surface, and not unfrequently sloping field.

Then, notwithstanding the changing of the position of the arches the grass would be worn off, and the surface become bare from excessive play. Then a great step forward was made in the game. Where great attention was paid to the game, the courts were prepared entirely free from turf, the surface carefully scraped and rolled and sanded slightly, so that balls would vary only a trifle, if any, in passing the length of the field. Then was added a substantial border as the matter of permanence of location seemed to be thus settled. This border made of lumber, varying in size from the ordinary scantling three by four inches, to a more substantial timber four inches by six, laid flat, proved to be the greatest feature in the development of the game.

The old string border, which simply marked the limits of the field, and prevented the game from having what might be called a concentrated attention, was to the most advanced players a thing of the past. We are speaking now of the development or evolution of the game, under the most favorable auspices possible, namely the attention of thoughtful, practical men, who saw in the game continually greater and greater possibilities, and spared neither time nor expense in their united efforts to advance and perfect it. And it was this close attention that has led to the most important evolution. Although the old game in its simpler form was still being played, and must continue to be played, thoughtful players, wide awake to availing themselves of every possible means of bettering the situation, in order to disassociate what was essentially a new game, from the old-fashioned (in their experience) grass-court game, began to exercise their wits to devise a new name for their loved pastime. The old mother game had not by any means outlived its usefulness, in fact it was, and still is, increasing, but the scientific features of the improved game were of such a character that the leading spirits decided that there must be a new name for the really new game. Various names were presented, but the prize was offered to that person whose selected name would be endorsed by the National Association of (up to this date) Croquet. The honor of selecting the name that ran the gauntlet and

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was finally selected by vote of the National Association in 1898, rests upon Mr. J. S. Babcock, of Cedar Street, New York City. The old name Croquet was simply decapitated and decaudalized, by taking off one letter from the beginning, c, and one letter from the end, t, leaving the word Roque, so that etymologically, as well as in the features of the game itself, it represents the essence and heart of the old game, though added features have greatly increased what might be called its scientific attractions, so that it is sometimes alluded to as "scientific croquet." It stands now a somewhat unique, fully Americanized version (so to speak) of an originally imported game.

The new name, moreover, gives it still a little flavor of French extraction, and altogether, it was about the happiest hit in the way of name selection that could possibly have been made. The chief points of difference between the two games, as now played, in this country (roque has not yet been introduced, to our knowledge, "across the water") are the following: and yet there will, of necessity, be a great sameness in the wording of the rules and in their practical observance. Croquet is originally and distinctively a *lawn game*. Roque is always played on a prepared court, freed entirely from grass or turf. The ordinary croquet court has no fixed border, limiting the field of play, or preventing the passing of the balls beyond the sphere of actual play. Substantial timber borders, however, are one of the indispensable accessories of roque. Moreover upon these border timbers are placed now in every well-equipped field rubber strips, either the discarded rubber from billiard tables, or as is sometimes the case, especially prepared strips. These are placed at the proper height, and serve as in billiards for the making of even difficult carom shots, when the object ball is not exposed to a direct shot.

In roque the short-handled mallet takes the precedence, but the boxes of croquet equipment, as ordinarily prepared for sale, have unless otherwise specially ordered the long-handled mallet.

As to the balls, croquet may have either, but roque always those of the best hard rubber, made by a special formula for the sake of greater tenacity and resiliency. It is generally conceded that it is only a natural evolution, as a player increases in his excellence of play, to pass from croquet into the larger possibilities of the game of roque.

The National Association.—This was originally of croquet. But when the name was changed the old name lapsed into history, and has never been resuscitated with any other organization. Norwich, the Rose City of New England, has for thirty years been a favorite trysting place for the ardent devotees of these games, the meeting place of our National Association. Other cities have their special tournaments, Philadelphia, and of late years Washington, D. C., where The Tournament of the South, so called, has been held, in the fall, a sort of aftermath of the Norwich meet in August.

At Cottage City, Martha's Vineyard, Mass., under the auspices of the Martha's Vineyard Roque Club, some eight or nine finely-equipped

courts are found, where lovers of the game in their summer vacation time, may have their fill of it, mixed with the gentle breezes from the adjacent waters of the sea.

The climate of California, in the southern part, is so equable and so well adapted to the game that it has made great progress there and taken a lasting hold upon sojourners. They soon become "converted," and at Pacific Grove, Long Beach, and other places the tourist may enjoy to the full the rare sport there afforded and unconsciously but surely drink in the tonic of Nature from the overflowing cup she holds to the lips.

TERMS USED IN CROQUET.

- To Roquet*—To hit with one's own ball another ball for the first time.
To Croquet—To place player's ball against the roqueted ball and then striking his own ball, moving both.
Carom—A rebounding from an arch, a stake, or the border.
In Play—A ball is in play so long as points are made, or balls hit in accordance with the rules.
Points—See Rule 23.
Dead Ball—A ball on which the player has played since making a point. It is then *dead* to the player till he makes another point or has another turn.
Direct Shot—Roquet—This is a direct shot, whether the ball in passing to its destination does or does not carom from a wire, or a stake or the border.
Drive or Block—English "Rush"—A roquet played so as to send the object ball to some desired spot.
Out—To drive the object ball to a desired position, by causing player's ball to hit it on one side.
Run or Break—The making of a number of points in the same turn.
Set Up—To locate the balls so as to afford facility for making the next point or run.
Wiring—To leave the balls so that the next finds a wire between his ball and the object ball.
Object Ball—The ball at which the player aims.
Jump Shot—Striking the ball so as to make it jump over any obstacle between it and the object aimed at. To do this, the ball should be struck with considerable force on the top just back of the centre.
Gulley or Danger Ball—The next played on the adversary's side.
Innocent Ball—The last played ball of the adversary.
Rover—A ball that has made all the points except the last.
Tight Croquet—Is holding with the hand or foot the ball placed against another for the sake of croquet, thus allowing only the latter to be moved.
Loose Croquet—Is striking a ball when it is in contact with another, where it has been placed for the purpose of croquet, thus moving both balls.
Scoring—See Rule 7.

CROQUET RULES.

Note.—The following Rules, though adapted and adopted for Loose Croquet, are, nevertheless, used by the most prominent clubs of the country as authority in *Tight Croquet*. Some rulings are to be construed as referring only to Loose Croquet. But of these there can be no doubt, from the nature of the game and the wording of the rules.

RULE 1.—No player or other person shall be permitted to interfere with the result of a game by any word or act calculated to embarrass the player, nor shall any one, except a partner, speak to a player while in the act of shooting.

RULE 2.—The order of colors shall be red, white, blue, black.

RULE 3.—There shall be no restriction as to kind or size of mallet used—one or two hands may be used in striking.

RULE 4.—No player shall change his mallet during a game without permission of his opponent, except in case of accident, or to make a "jump shot."

RULE 5.—Should a ball or mallet break in striking, the player may demand another stroke, with a new ball or mallet.

RULE 6.—Every player shall be provided with a clip or indicator of the same color as his ball, painted on one side only, which he must affix to his arch next in order in course of play, before his partner plays, with the painted side towards the front of the arch. Should he fail to do so his clip must remain upon the arch it rested on before he played, and he must make the points again. Should he move his marker beyond or back of the point he is for, his attention must be called to such error before he plays again, otherwise it shall stand. Should a player put a ball through its arch, he must move the corresponding clip to its proper arch before the next ball is played, otherwise the clip remains as before.

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No player shall lose any point or points by the misplacing of his clip by his adversary.

RULE 7.—All games shall be opened by scoring from an imaginary line through the middle wicket, and playing two balls each (not partner balls) towards the boundary line at the head of the ground. The player, the centre of whose ball rests nearest the border line, shall have choice of play, using that ball; provided that, in scoring, the ball did not strike the border or any other ball. The balls shall then be placed in the four corners of the ground (nearest the centre of the field), partner balls diagonally to each other, the playing ball and next in sequence to be placed at the head of the grounds, all balls being in play.

RULE 8.—The ball must be struck with the face of the mallet, the stroke being delivered whenever touching the ball it moves it. Should a stake or wire intervene, the stroke is not allowed unless the ball is struck at the same time, and if the ball is moved, without being struck by the face of the mallet, it shall remain where it rests, and should a point or roquet be made, it shall not be allowed, except by the decision of the umpire as to the fairness of the shot. All balls thus moved by a false shot may be replaced or not at the option of the opponent.

RULE 9.—When making a direct shot (i. e., roquet), the player must not push or follow the ball with his mallet; but when taking croquet from a ball (two balls being in contact), he may follow his ball with the mallet; but must not strike it twice.

RULE 10.—If a player strikes his ball before his opponent has finished his play, the stroke shall stand, or be made over, at the option of the opponent.

RULE 11.—Should a ball rest against or near a wire, and the umpire, or other person agreed on, should decide that in order to pass through the arch, an unfair or push shot would have to be made, it shall not be allowed if made.

RULE 12.—Should a player in making a stroke move with his mallet any other than his object ball, it shall be a foul and his play ceases, and all balls moved shall be replaced as before the stroke, or remain where they rest, at the option of the opponent.

RULE 13.—If a dead ball in contact with another ball moves, on account of the inequality of the ground, while playing the other ball away from it, the player does not lose his shot.

RULE 14.—A ball must not be touched while on the field, except after a roquet, when it is necessary to place it beside the roqueted ball for the purpose of croquet, or to replace it when it has been moved by accident—except by permission of the opponent.

RULE 15.—A ball roquets another when it comes in contact with it by a blow from the player's mallet, or rebounds from a wicket or a stake or the border; also when it comes in contact with it when croquet is taken from another ball.

RULE 16.—A player after making roquet shall not stop his ball for the purpose of preventing its hitting another. Should he do so his play ceases and all balls shall be replaced as before the stroke, or remain, at the option of the opponent.

RULE 17.—Roquet gives to the player the privilege of roquet-croquet only, and play must be made from the roqueted ball.

RULE 18.—If a player in taking a croquet from a ball, fails to move it, such stroke ends his play, and his ball must be returned, or left where it stops, at the option of the opponent.

RULE 19.—A player, in each turn of play, is at liberty to roquet any ball on the ground once only before making a point.

RULE 20.—Should a player croquet a ball he has not roqueted, he loses his turn, and all balls moved by such play must be replaced to the satisfaction of the umpire, or adversary. Should the mistake not be discovered before the player has made another stroke, the play shall be valid, and the player continue his play.

RULE 21.—In taking croquet from a ball, if player's ball strikes another, to which he is dead, such stroke does not end his play.

RULE 22.—If a player roquets two or more balls at the same stroke, only the first can be croqueted.

RULE 23.—A player makes a point in the game when his ball makes an arch or hits a stake in proper play.

RULE 24.—If a player makes a point, and afterwards at the same stroke roquets a ball, he must take the point, and use the ball. If the roqueted ball is beyond the arch, as determined by Rule 45, and playing ball rests through the arch, the arch is held to be first made.

[NOTE.—While this is not mathematically correct, the rule is so made to avoid disputes and difficult measurements.]

RULE 25.—If a ball roquets another, and afterwards at the same stroke makes a point, it must take the ball and reject the point.

RULE 26.—A player continues to play so long as he makes a point in the game, or roquets another ball to which he is in play.

RULE 27.—A ball making two or more points at the same stroke, has only the same privilege as if it made but one.

RULE 28.—Should a ball be driven through its arch, or against its stake by croquet or concussion, it is a point made by that ball, except it be a rover. [See Rule 52.]

RULE 29.—If a player play by direct shot on a dead ball, all balls displaced by such shot shall be replaced in their former position, and the player's ball placed

against the dead ball on the side from which it came; or all balls shall rest where they lie, at the option of the opponent.

RULE 30.—If a player, in making a direct shot, strike a ball on which he has already played; that is, a dead ball, his play ceases. Any point or part of a point or ball struck, after striking the dead ball, is not allowed, and both balls must be replaced in accordance with the preceding rule. A dead ball displaced by other than direct shot, shall not be replaced.

RULE 31.—If playing ball in passing through its arch strike a dead ball that is beyond the arch, as determined by Rule 45, the ball shall not be considered a dead ball if playing ball rests through its arch, and the point shall be allowed.

RULE 32.—A ball accidentally displaced, otherwise than as provided for in Rule 12, must be returned to its position before play can proceed.

RULE 33.—If a ball is stopped or diverted from its course by an opponent, the player may repeat the shot or not as he chooses. Should he decline to repeat the shot, the ball must remain where it stops, and, if playing ball, must play from there.

RULE 34.—If a ball is stopped or diverted from its course by a player or his partner, the opponent may demand a repetition of the shot if he chooses. Should he decline to do so, the ball must remain where it stops, and, if playing ball, must play from there.

RULE 35.—If a ball is stopped or diverted from its course by any object inside the ground, not pertaining to the game or ground, other than provided for in Rules 33 and 34, the shot may be repeated or allowed to remain, at the option of the player. If not repeated, the ball must remain where it stops, and, if playing ball, play from there.

RULE 36.—Should a player, on commencing his play, find his ball in contact with another, he may hit his own as he likes, and then have subsequent privileges the same as though the balls were separated an inch or more.

RULE 37.—A ball shot over boundary or border must be returned at right angles from where it stops. [The boundary is a line extending around the field, 30 inches from the border and parallel with it.]

RULE 38.—A ball is in the field only when the whole ball is within the boundary line.

RULE 39.—No play is allowed from beyond the boundary line, except when a ball is placed in contact with another for the purpose of croquet.

RULE 40.—If a player strikes his ball when over the boundary line, he shall lose his stroke, and the balls shall be replaced or left where they stop at the option of the opponent.

RULE 41.—If a player hit a ball off the field by a direct shot, his play ceases, and the roqueted ball is placed on the boundary opposite the point where it lay before being thus hit. But if a ball off the field is hit from a croquet, the hit shall not be allowed, the ball shall be replaced properly in the field, and the play shall not cease.

[NOTE.—The three following rules apply more particularly to the old style of grounds with square corners, and are retained for some clubs that have not adopted the new style of grounds.]

RULE 42.—The first ball driven over the boundary line into a corner must be placed on the corner at the intersection of the two boundary lines.

RULE 43.—If a ball, having been struck over the boundary line, is returnable at the corner, another ball being on or entitled to the corner, it shall be placed on that side of the corner ball on which it went off.

RULE 44.—If two balls, having been shot over the boundary line, rest directly behind one another at right angles with boundary line, they shall be placed on the line alongside of each other in the same relative position in which they were played off. This can occur only when the centres of the two balls rest directly behind one another at right angles with the boundary line.

RULE 45.—A ball is not through an arch when a straight edge, laid across the two wires on the side from which the ball came, touches the ball without moving the arch.

RULE 46.—If a ball has been placed under an arch, for the purpose of croquet, it is not in position to run that arch.

RULE 47.—If a ball be driven under its arch from the wrong direction and rests there, it is not in position to run that arch in the right direction.

RULE 48.—If a ball, shot through its arch in the right direction, not having come in contact with another ball or the border, rolls back through or under that arch, the point is not made, but the ball is in position if left there.

RULE 49.—The cage wicket may be made in one, two or more turns, provided the ball stops within limit of the cage.

RULE 50.—Any playing ball within, or under, a wicket, becomes dead to advancement through the wicket from that position if it comes in contact with any other ball by a direct shot.

RULE 51.—A rover has the right of roquet and consequent croquet on every ball once during each turn of play, and is subject to roquet and croquet by any ball in play.

RULE 52.—Rovers must be continued in the game until partners become rovers, and go out successively, and a rover that has been driven against the stake cannot be removed to make way for the next rover.

RULE 53.—If a player plays out his proper turn, whether with his own or any

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other ball, or in his proper turn plays the wrong ball, and the mistake is discovered before the next player has commenced his play, all benefit from any point or points made is lost, and his turn of play is forfeited. All balls moved by the misplay must be returned to their former position by the umpire or adversary. If the mistake is not discovered until after the next player has made his first stroke, the error must stand.

RULE 54.—If a player makes a point he has already made, his marker not being on that point, and the mistake is discovered before the proper point is made, the play ceases with the shot by which the wicket was re-made, and the marker remains where it stood at the beginning of this play. All balls shall be left in the position they had at the time the wicket was re-made. If not discovered before the proper point is made, the points so made are good, and play proceeds the same as if no error had been made.

RULE 55.—If an error in order is discovered after a player has struck his ball, he shall be allowed to finish his play, provided he is playing in the regular sequence of his partner's ball last played. In case of dispute as to proper sequence of balls, it shall be decided by the umpire; if there is no umpire, by lot. No recourse shall be had to lot unless each party expresses the belief that the other is wrong.

RULE 56.—At any time an error in order is discovered, the opposite side shall follow with the same ball last played (the proper sequence); but before playing their opponents shall have privilege to demand a transposition of adversaries' balls.

Example.—Black plays by mistake after red—the error is not discovered. Blue plays in the proper sequence of his partner red, and seeing that black has just played, is thus led to believe it the innocent ball, and upon concluding his play, leaves black by red. Now, if error in order is discovered, the player of red and blue can demand that the position of black and white be transposed.

RULE 57.—The surface of grounds shall not be changed during a game by either player unless by consent of the umpire, and if so changed at the time of playing, the shot shall be declared lost.

RULE 58.—In making all side or corner wickets the playing ball shall pass through them towards the centre.

RULE 59.—If a rule is violated, a penalty for which has not been provided, the player shall cease his play.

The National Croquet Association at their meeting in August, 1894, adopted the following:

Should a ball be resting in a corner and another ball be played so that it should be brought in at the same place, it must be placed on that side of the ball upon which it passed over the boundary line.

TERMS USED IN ROQUE.

Boundary.—The boundary is a line extending around the field, 28 inches from the border.

Bombard.—To drive one ball so as to displace another.

Carom.—A rebounding from an arch, a stake, or the border.

Combination.—A Combination is the using of two or more balls to cause the movement of another.

Corner (Point).—A corner as a *point* is the vertex of any angle of the boundary line.

Corner (Place).—A Corner as a *place* is the space included between the border and two perpendiculars drawn from a corner point to the border.

Danger Ball.—The ball to be played next, being that of the adversary.

Dead Ball.—A ball upon or from which the player has taken his turn since making a point. It is then *dead* to all direct shots, till he makes another point, or has another turn of play.

Ball in Play.—A ball is in play so long as points are made of balls hit, in accordance with the rules.

Innocent Ball.—The last played ball of the adversary.

Rover Ball.—A ball that has no more arches to make.

Points.—See Rule 22.

Scoring.—See Rule 6.

Shot
Stroke } These are of the same meaning.

Direct Shot.—When the playing ball struck with the mallet passes *directly* to another ball, either by a jump shot, or by a carom upon it from a stake, an arch, or the border. (See Rules 14 and 35.)

Drive Shot.—A direct shot made so as to send the object ball to some direct spot.

Follow Shot.—When the playing ball in taking its turn is made to follow the object ball in nearly or quite the same direction. (See Rule 8.)

Foul Shot.—See Rules 7, 11, 17, 18, 39, 40.

Jump Shot.—Striking the ball so as to make it jump over any obstacle between it and the object aimed at.

Live Ball.—A ball upon which the playing ball has a right to play.

Object Ball.—The ball at which the player aims.

Playing Ball.—The ball that in proper turn of play is to be struck with the mallet.

Split Shot—Any play from a ball upon which the playing ball has counted. (See Rule 14.)

To play from a ball is to place the playing ball in contact with it, and then to make a split shot.

Set-up—A location of a ball or balls, in the interest of one's partner, so that his next play or run may most easily be made.

Run—The making of a number of points in one turn of play.

Wiring—To wire a ball is to locate it, so that a wire or arch will interfere with a direct shot.

Within the Limits of the Cage—See Rule 48. A ball is within the limits of the cage or centre wicket, if a straight-edge or string held against the *inside* of the arches touches the ball.

ROQUE RULES.

RULE 1.—No player or other person shall be permitted to interfere with the result of a game by any word or act calculated to embarrass the player, nor shall any one, except a partner, speak to a player, while in the act of shooting.

RULE 2.—The order of colors shall be Red, White, Blue, Black, but the game may be opened by playing any color.

RULE 3.—There shall be no restriction as to mallets used. A player may change his mallet at any time during a game.

RULE 4.—Should a ball or mallet break in striking, the player may demand another stroke, with a new ball or mallet.

RULE 5.—Every player shall be provided with a clip or indicator of the same color as his ball, painted in full on one side only, which he must affix to his arch next in order in course of play, before the partner ball is played, with the painted side toward the front of the arch. Should he fail to do so his clip must remain upon the arch upon which it was last placed and he must make the points again. Should he move his marker back of the point he is for, attention must be called to such error before the partner ball is played, otherwise it shall stand. Should a marker be moved beyond the proper point, it shall be replaced, provided attention is called to the error before the point upon which it rests is made. Should a player put a ball through its arch, he must move the corresponding clip to its proper arch before the next ball is played, otherwise the clip remains as before. No player shall lose any point or points by the misplacing of his clip by his adversary.

RULE 6.—All games shall be opened by scoring from an imaginary line running through the middle wicket across the field, each player playing two balls of any color toward the boundary line at the head of the court. The player, the centre of whose ball rests nearest this border line, shall have choice of play, and balls, provided that, in scoring, the ball did not strike the border, any other ball, or the stake. The balls shall then be placed on the four corners of the ground (nearest the centre of the field), partner balls diagonally to each other, the playing ball and next in sequence to be placed on the upper corners, the choice of corners resting with the playing ball and all balls being in play.

RULE 7.—The ball must be struck with the face of the mallet, the stroke being delivered whenever touching the ball it moves it. Should a stake or wire intervene, the stroke is not allowed unless the ball is struck at the same time, and if the ball is moved without being struck with the face of the mallet, it shall remain where it rests, and should a point be made, or another ball be struck, it shall not be allowed, except by the decision of the umpire as to the fairness of the shot. All balls thus moved by a false shot may be replaced or not, at the option of the opponent, but no point or part of a point made, shall be allowed.

RULE 8.—When making a direct shot, the player must not push or follow the ball with his mallet; but when playing from a ball the two balls being in contact, he may follow his ball with the mallet; but must not strike it twice, give it a second impetus, or change the direction of the stroke.

RULE 9.—If a player strikes his ball before his opponent has finished his play, the stroke shall stand, or be made over, at the option of the opponent. [See also Rule 52.]

RULE 10.—Should a ball rest against or near a wire, and the umpire, or other person agreed on, should decide that in order to pass through the arch, an unfair or push shot would have to be made, it shall not be allowed if made.

RULE 11.—Should a player in making a stroke, move with his mallet or mallet-head any other than his object ball, it shall be a foul and his play ceases, and all balls moved shall be replaced as before the stroke, or remain where they rest at the option of the opponent.

RULE 12.—If a dead ball in contact with another ball, moves on account of the inequality of the ground while playing the other ball away from it, the player does not lose his shot.

(a) If a live ball is similarly situated and moves on account of the inequality of the ground when the ball in contact is played away from it, the playing ball shall not be regarded as having counted upon it. (See Rule 14.)

(b) If a ball, in proper course of play, rest against another ball, and in picking up the playing ball for the purpose of continuing the play, the other ball moves on account of the inequality of the ground, no attempt shall be made to replace it.

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RULE 13.—A ball must not be touched while on the field, except when it is necessary to place it beside the ball that has been hit for the purpose of playing from it, or to replace it when it has been moved by accident—except by permission of the opponent. [Picking up wrong ball, therefore (Rule 58) ends play.]

RULE 14.—A ball counts upon another when it comes in contact with it by a blow from the player's mallet, or rebounds from a wicket, or a stake or the border; also when it comes in contact with it when play is taken from another ball. (See Rule 16.)

RULE 15.—A player after counting upon another ball shall not stop his ball for the purpose of preventing its hitting another. Should he do so his play ceases, and all balls shall be replaced as before the stroke, or remain, at the option of the opponent.

RULE 16.—When one ball counts upon another (see Rule 14), play must be taken from it. After taking play from a ball and moving it, the player is entitled to one more stroke.

RULE 17.—If a player in playing from a ball, fails to move it, such stroke ends his play, and his ball must be returned; or left where it stops, at the option of the opponent.

RULE 18.—A player, in each turn of play, is at liberty to play upon any other ball once only before making a point.

RULE 19.—Should a player play from a ball he has not hit, he loses his turn, and all balls moved by such play must be replaced to the satisfaction of the umpire or adversary. Should the mistake not be discovered before the player has made another stroke, the play shall be valid, and the player continue his play.

RULE 20.—In playing from a ball, if player's ball strike another, to which he is dead, such stroke does not end his play. (See also Rule 29.)

RULE 21.—If a player hits two or more balls at the same stroke, play can be taken only from the first.

RULE 22.—A player makes a point in the game when his ball makes an arch or hits a stake in proper play. (For Hovers, see Rule 51.)

RULE 23.—If a player makes a point, and afterward at the same stroke hits a ball, he must take the point and use the ball. If the struck ball is beyond the arch, as determined by Rule 44, and the playing ball rests through the arch, the arch is held to be first made. (See also Rule 40.)

RULE 24.—If a ball counts upon another, and afterward by the same stroke makes a point, it must take the point and reject the point.

RULE 25.—A player continues to play so long as he makes a point in the game, or counts upon another ball.

RULE 26.—A ball making two or more points at the same stroke, has only the same privilege as if it made but one.

RULE 27.—If a ball be driven through its arch or against its stake by any carom, combination or concussion, it is a point made by that ball. (For a Hover, see Rule 51.)

RULE 28.—If a player play by direct shot on a dead ball, all balls displaced by such shot shall be replaced in their former position, and the player's ball placed against the dead ball on the side from which it came; or, all balls shall rest where they lie, at the option of the opponent.

RULE 29.—If a player, in making a direct shot, strike a ball on which he has already played; that is, a dead ball, his play ceases. Any point or part of a point or ball struck, after striking the dead ball, is not allowed, and both balls must be replaced in accordance with the preceding rule. A dead ball displaced by other than direct shot shall not be replaced. (See Rule 20.)

RULE 30.—If playing ball in passing through its arch strike a dead ball that is beyond the arch, as determined by Rule 44, the ball shall not be considered a dead ball if playing ball rests through its arch, and the point shall be allowed. (See Rule 40.)

RULE 31.—A ball accidentally displaced, otherwise than as provided for in Rule 11, must be returned to its position before play can proceed.

RULE 32.—If a ball is stopped or diverted from its course by an opponent, the player may repeat the shot or not as he chooses. Should he decline to repeat the shot, the ball must remain where it stops, and, if playing ball, must play from there.

RULE 33.—If a ball is stopped or diverted from its course by a player or his partner, the opponent may demand a repetition of the shot if he chooses. Should he decline to do so, the ball must remain where it stops, and, if playing ball, must play from there.

RULE 34.—If a ball is stopped or diverted from its course by any object inside the ground, not pertaining to the game or ground, other than provided for in Rules 32 and 33, the shot may be repeated, or allowed to remain, at the option of the player. If not repeated, the ball must remain where it stops, and, if playing ball, play from there.

RULE 35.—Should a player, on commencing his play, find his ball in contact with another, he may hit his own as he likes, and then have subsequent privileges, the same as though the balls were separated an inch or more.

RULE 36.—A ball shot over boundary or border must be returned at right angles from where it stops.

RULE 37.—A ball is in the field only when the whole ball is within the boundary line.

RULE 38.—No play is allowed from beyond the boundary line, except when a ball is placed in contact with another for the purpose of playing therefrom.

RULE 39.—If a player strike his ball when over the boundary line, he shall lose his stroke, and the balls shall be replaced or left where they stop, at the option of the opponent.

RULE 40.—If a player hit a ball off the field by a direct shot, his play ceases, and the ball thus hit is placed on the boundary opposite the point where it lay before being thus hit. But if a ball off the field is hit by a split shot the hit shall not be allowed, the ball shall be replaced properly in the field, and the play shall not cease.

RULE 41.—The first ball driven over the boundary line into a corner must be placed on the corner at the intersection of the two boundary lines.

RULE 42.—If a ball, having been struck over the boundary line, is returnable at the corner, another ball being on or entitled to the corner, it shall be placed on that side of the corner ball on which it went off.

RULE 43.—If two balls, having been shot over the boundary line, rest directly behind one another at right angles with boundary line, they shall be placed on the line alongside of each other in the same relative position in which they were played off. This can occur only when the centres of the two balls rest directly behind one another at right angles with the boundary line.

RULE 44.—A ball, running its arch in the right direction, is through when a straight edge, laid across the two wires on the side from which the ball came, does not touch the ball.

RULE 45.—If a ball has been placed under an arch, to play from another ball, it is not in position to run that arch.

RULE 46.—If a ball be driven under its arch from the wrong direction, and rests there, so that a straight edge laid against the wires on the side of the arch from which it came, fails to touch it, it is in position to run that arch in the right direction.

RULE 47.—If a ball, shot through its arch in the right direction, not having come in contact with another ball or the border, rolls back through or under that arch, so that a straight edge applied as in Rule 44, touches it, the point is not made, but the ball is in position if left there.

RULE 48.—The cage wicket may be made in one, two or more turns, provided the ball stops within the limits of the cage. (See explanation of terms used in Roque.)

RULE 49.—Any playing ball within, or under a wicket, becomes dead to advancement through the wicket from that position, if it comes in contact with any other ball by a direct shot.

RULE 50.—A rover has the right to play upon every other ball once during each turn or play, and may be played upon, as any other ball.

RULE 51.—All balls must be continued in the game until two rovers, being partners, are driven against the stake, either by a single stroke or by two successive strokes of the mallet, and the last point or points may be made as any other. A rover that has been driven against the stake and over the boundary must be replaced properly in the field before the next stroke is made, and cannot be removed to allow the partner ball to hit the stake.

RULE 52.—If a player plays out of his proper turn, or in his proper turn plays the wrong ball, and the mistake is discovered before the next player has commenced his play, all benefit from any point or points made is lost, and his turn of play is forfeited. All balls moved by the misplay must be returned to their former position by the umpire or adversary. If the mistake is not discovered until after the next player has made his first stroke, the error must stand. (See Rule 9.)

RULE 53.—If a player makes a point he has already made, his marker not being on that point, and the mistake is discovered before the proper point is made, the play ceases with the shot by which the point was re-made, and the marker remains where it stood at the beginning of this play. All balls shall be left in the position they had at the time the point was re-made. If not discovered before the proper point is made, the points so made are good, and play proceeds the same as if no error had been made.

RULE 54.—If an error in order is discovered after a player has struck his ball, he shall be allowed to finish his play, provided he is playing in the regular sequence of his partner's ball last played. In case of dispute as to proper sequence of balls, it shall be decided by the umpire; if there is no umpire, by lot. No recourse shall be had to lot unless each party expresses the belief that the other is wrong.

RULE 55.—At any time an error in order is discovered, the opposite side shall follow with the same ball last played (the proper sequence); but before playing their opponents shall have privilege to demand a transposition of adversaries' balls.

Example.—Black plays by mistake after Red—the error is not discovered—Blue plays in the proper sequence of his partner Red, and seeing that Black has just played, is thus led to believe it the innocent ball, and upon concluding his play, leaves Black by Red. Now, if error in order is discovered, the player of Red and Blue can demand that the position of Black and White be transposed.

RULE 56.—A player, before or during his play, may require either arches or grounds or anything pertaining thereto to be placed in proper condition.

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RULE 57.—In making all side or corner wickets the playing ball shall pass through them toward the centre.

RULE 58.—If a rule is violated, a penalty for which has not been provided, the player shall cease his play.

THE REWARDS OF FENCING.

BY

LOUIS SENAC, MAITRE D'ARMES, NEW YORK.

THE fencer is always enthusiastic concerning his art, his *grande passion*. And why is this the case? Why does he not accept his fencing pleasures philosophically and continue in the even tenor of his way? The truth is, that he has found something of great value, of undeniable fascination, and about which he believes all his friends and acquaintances should know. Therefore does he publish the tidings abroad.

Sometimes uninitiated folk marvel at the unbounded praise fencing devotees shower on their favorite diversion. They stand aloof with a superior air and occasionally condescend to show a modicum of interest in the foils.

There comes a time, however, when the supercilious one becomes infected by the fever. He dons fencing garb, grasps a foil, and makes some instructor's life one continuous round of labor for weeks at a time. Then one day he realizes that he is actually a convert to the foils and that his enthusiasm may well be said to border on the fanatical. "I came to laugh and I remained to learn," he says to himself, and delves still deeper into the mysteries of the intricate, yet unparalleled science.

It is through many rewards to its disciples that fencing holds the attention of every man and woman, even though he or she taste ever so sparingly of its cup of pleasure. First, the practice of fencing affords an exercise that is absolutely unrivalled as a natural aid to the highest form of physical development and education. (Muscles as well as brains can be educated.) Can you fail to recognize the fencer? His grace and elasticity of bearing; his elegance of manner; his calm reserve, and, withal, the keenest of eyes; his firm hand-clasp, literally vibrating with energy; the admirable poise of his head; his erect carriage and his buoyant step set him apart from ordinary men, men of sedentary pursuits. The fencer is more what the Creator intended man to be than is the merchant or banker who shuts himself in his private office from morning until night, cramping his chest and lungs, rounding his shoulders and breathing "second-hand" air.

The physical benefits of fencing are so numerous, in fact, that he that would enumerate them in detail must needs possess a vast measure of endurance. Every muscle is brought into play, individually and in combination, and the system is invigorated surprisingly. As

a stimulant, a fencing bout is far more effective than the best tonic a physician could prescribe. So if you are a victim of any sort of a depressing affliction, try the fencing cure. After finishing with the foils, a cold bath and a rubdown with a rough towel will chop off at least ten years from the burden Old Father Time has rolled upon you.

The fingers, wrists, arms, shoulders, and legs are doubled in power by methodical fencing. This development of the muscular tissues, moreover, is invariably symmetrical. No huge, unsightly bunches of muscle stand out to impress bystanders. Lithe, agile, and quick as a wildcat, the operator of the foil is as far removed from the abnormal as is the product of a sculptor's chisel. Large muscles, such as some few of the Italian fencers possess, for instance, retard the rapidity of movement and render impossible good form of even the most elementary description. In addition, overdeveloped muscles tire far more quickly than do those of average size.

Fencing also gives a man a mental equipment superior to that which he originally devoted to the art. The exercise requires study, thought, and memory. It is none the less a science for being a recreation. Do not deceive yourself on this point. The brain is prompted to act without a moment's hesitation. It must change perception into action instantaneously. Readiness of wit is an unmistakable attribute of the fencer. He is as resourceful and as full of cunning as an Apache brave, and this is by no means a comparison to be sneered at. The fencer should make a better financier or diplomat than should a man reared along restricted lines. He should be quick to detect the weakness or strength of an argument or a situation and act swiftly, unerringly. He must do this very thing in fencing bouts. Cannot the same practice be transformed to business or professional life? There is no apparent reason to the contrary.

In social and everyday life the fencer has a distinct advantage over his narrower, uninterested, more prosaic co-laborer. He feels sure of himself at all times and under all conditions. His training has rendered it impossible for him to strike an awkward pose. He will unconsciously make movements that will attract attention through their ease. The constant use of his arms and hands has made him stronger than the ordinary man and the knowledge of this fact gives him confidence he would otherwise lack. In the business world he will be able to stand a great strain. No task will appall. The fresh blood and newly formed tissues will support him through many a crisis when competitors are exhausted and mayhap seriously ill through their efforts. The atmosphere of freshness and enthusiasm that he will unconsciously carry with him is certain to impress favorably the people with whom he comes in contact.

Fencing knowledge has often saved a man's life, or at least preserved him from serious bodily injury or loss of valuables. Attacked by footpads in a lonely spot, the fencer is able to keep his assailants at

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a distance with nothing more than a cane and possibly disable them. A relative of the writer was once surprised in his home by a burglar. The intruder, a burly ruffian, sought to overpower the man in question by brute force. The latter, however, seized an umbrella, and, being an expert fencer, resisted the rushes of his opponent and punished him so severely that he was unable to escape from the police.

Women and Fencing.

Women find the art of handling the foils to be a wonderful benefit in many ways. The exercise reduces surplus adipose tissue, making the figure trim and comely, rounds the muscles, develops the busts, and the stimulus to the circulation of the blood improves the complexion to a highly desirable degree. They find fencing to be as conducive to lightness of foot and all-around gracefulness as dancing, and all the large fencers' clubs reserve certain hours each week for the convenience of the wives and daughters of the members. In the New York Fencers' Club, for instance, an extract from the provisions of the House Committee reads as follows:

"The Ladies' Class has the privileges of the Club every Monday, Wednesday, and Friday morning from 10 until 1 o'clock. The *Maitre d'Armes* and *Prévôt* will be in attendance to give lessons."

Some of the woman fencers in this country are remarkably expert in execution of the various thrusts, parries, and feints, and Miss Toupie Lowther, the well-known champion of the English women's fencing world, is more than a match for many a man that considers himself a capable performer.

FENCING FOR WOMEN.

BY

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FENCING, as may be readily understood, calls constantly into motion all the muscles of the human frame, and yet strains none. Women of delicate physique find it not only without harmful results, but with excellent advantages from the beginning. It trains the faculties of perception and those governing responsive action; it keeps the head as well as the hands, the feet, and the entire body engaged. It lightens and quickens the eye and dispels mental gloom; it gives suppleness and strength, poise, erect carriage, and ease of motion.

It gives physical elasticity, which women in particular desire above muscular development. Heavy muscular development is not in keeping with the real conception of feminine grace. The inherent grace

of form is by its means brought with tension and action enough to give suppleness, firmness, and a correct contour of the muscles.

An unconscious poise is acquired, and is one among many of the valuable results. Speed of eye, of hand, a firm balance, judgment of distance, action, attack, and response bring into play almost every faculty of the mind and body. A few minutes with the foils would convince even the veriest amateur of the great benefit and almost marvellous effect derived from the practice of fencing.

In its essential difference from other sports the matter of graceful, quick, and varying poses necessitated in fencing, contrasts most forcibly with some of the heavier exercises. The correction of any fault in the respiration or circulation is almost immediate, while the effect is to open the pores and produce a perfectly healthy action of the skin, a brightening of the eyes, and clearing of the complexion.

Pupils should be taught to fence with both right and left hands to ensure an equal and symmetrical development and muscular control and to improve ambidexterity. For the reduction of embonpoint it is highly recommended, and is especially valuable in the case of those who are inclined to be anæmic, this condition usually resulting from lack of exercise and fresh air.

FIRST LESSONS IN FENCING.

BY WILLIAM J. HERRMANN, INSTITUTE OF PHYSICAL TRAINING, PHILADELPHIA.

NOMENCLATURE OF THE FOIL.

Foil is divided into Blade and Hilt.

Blade is subdivided into:

"Point," which scores the touch; should be properly buttoned.

"Foible," upper third of weak part of blade.

"Middle," centre third of blade; where engagement takes place.

"Forte," lower third or strong part of blade, edges of which are used to parry.

"Tongue," soft part of blade running through hilt.

Regulation length of blade is 84 inches 5 blade.

Hilt subdivided into:

"Guard," which protects the hand.

"Grip," part grasped by sword hand.

"Pommel," weight of which regulates balance of foil.

TO GRASP THE FOIL.

Grip is held between thumb and forefinger, the other three fingers together underneath without clenching.

Thumb rests on convex side of grip about half inch from guard; concave side of grip rests on middle phalange of fore-finger.

The blade is directed largely in its course by the action of the thumb and forefinger and the wrist. Hold very firmly only when thrusting or parrying, or in a lengthy bout; your hand will become cramped, preventing handling the foil with the necessary delicacy. No finger should loose its position after once having taken the proper grasp.

POSITIONS OF THE SWORD-HAND.

"Supination," finger nails up.

"Pronation," finger nails down.

"Middling," thumb up.

"Prime," thumb down.

POSITIONS OF THE BODY.

1st or Preparatory Position.

2d or Guard Position.

3d or Lunge Position.

First Position.

Heels together, feet at right angles, right foot pointing directly forward.

Sword-arm and blade in one straight line; hand in supination at height of eyes.

Left arm hangs naturally at side, but clearing it, palm facing left front slightly. Left shoulder well drawn back.

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Body shows three quarter left front.
Head turned to right, looking squarely at opponent.
Eyes frankly on opponent's.

Second Position.

Feet at right angles, right toe pointing directly forward, heels in line, about twice the length of your own foot between heels, preferable more than less.

Right knee directly over instep, left knee in front of and to inside of left foot. Weight equally divided on both feet, and body poised upright on hips.

Body shows three quarter left front, but left hip well in. Left arm one continuous curve from shoulder to finger-tips, elbow as high as shoulder, finger-tips slightly higher than crown of head, thumb free, shoulder drawn back.

Sword-arm rounded, elbow about eight inches from body, hand in supination, about height of nipple, far enough to the left and high enough that a thrust in that line will not score; blade to cover, point in line about height of opponent's eyes.

As a general rule have your point somewhere between the height of his chin and eyes.

On Guard do not spare your legs; with practice you can bend them further with a consequent gain of power; should be low enough that you do not see your right foot as you drop your eyes.

Sword-arm bent too much handicaps you in parrying, and closing the lines threatened by your adversary's feints.

Sword-arm extended too much exposes your blade to attacks on it, such as binds, froissés, etc.

As a general rule carry your sword-hand about half-way between extended arm and a strong parry position.

If you show full left front instead of three quarter you handicap yourself; with your body turned full left front, it is extremely difficult to preserve a steady balance, sword-arm is less free; in consequence the parries become wider and slow and the lunge less rapid than it should be, as it is impossible to get the quick action of the loins which is essential to a quick extension.

Too much weight on the forward foot handicaps your lunge.

Too much weight on the rear foot handicaps your retreat.

As a rule, however, it is more to your advantage to favor the left foot than the right.

Regulate your guard according to your opponent's height. Your position on Guard should be free and unconstrained; adequately covered, to facilitate your attacks and defensive movements; the best possible position from which to attack and defend with equal facility. Be always fully on guard in every sense of the word.

Third Position.

In the lunge, glide forward with right foot grazing lightly, heel touching floor first, right foot pointing directly forward, heels in line, left foot flat on ground, well anchored; right knee perpendicularly over instep, left leg straight, left hip well in.

Body upright, left arm extended, palm up, about six inches to a foot from thigh.

Sword-arm extended, sword-hand in supination chin height; do not mask them, point in line with opponent's breast.

The lunge lengthens the thrust.

Half-Face Position.

Similar to first position, but sword arm and blade one straight line from shoulder to point; point slightly to the right about 4 inches from floor; hand in supination, 1st position with lowered sword.

TO PASS TO GUARD IN SEVEN MOVEMENTS.

Class or pupil at half-face.

1. 1st Position.

2. Lower your sword.

3. Pass sword to left, when right hand is opposite left hip, place back of left hand on the horizontal blade, finger nails touching guard, backs of both hands towards floor.

4. Elevate the arms, raise arms straight over head, keeping the blade horizontal and close to the body in its ascent, the fore and hands maintaining their same relative positions.

5. Rebend your arms, left arm and sword-arm takes position as on "On Guard."

6. Half-bend; bend both knees, separating them at the knees; heels remain on floor.

7. Advance the right foot; advance the right foot twice its own length, pointing directly forward in line with left heel and at right angle to left foot.

At the conclusion of the 7th movement, the pupil or class should find themselves "On Guard" (2d Position). The best position in which you are prepared to advance or retreat, attack or defend with equal ease and facility and without any preparatory movements.

TO PASS FROM GUARD (2D POSITION) TO LUNGE (3D POSITION).

Extension of the sword-arm. Sword-arm fully extended, but without stiffness, hand in supination at height of chin, point slightly lower than level of sword-hand; the body remains perfectly steady. In extending, extend arm with hand at height of chin, and by action of wrist drop point below hand level in line to chest.

EXTENSION OF THE BODY.

Quickly and simultaneously straighten left leg, glide forward with right foot, and lower left arm within about six inches of thigh, assuming third position.

Practise the extension diligently until executed with the greatest speed and precision.

The extension of the sword-arm must precede the extension of the body, and the body must remain upright and not fall forward on thigh.

Do not allow the ankle to project beyond the knee in the lunge; it interferes with a speedy recovery.

THE RECOVERY.

Bend the left leg, spring back sharply from right foot, throw the left arm up, draw back the right foot and sword-arm, finding yourself back on guard in second position.

Do not plant yourself heavily on the recovery, but be ever ready to instantly dart forward again.

Always recover with the greatest speed at your command.

THE APPEL.

Strike the floor sharply with the right foot without deranging the position of the body; used to test the equilibrium.

Modern fencing uses it chiefly in Grand Salute, although at one time used considerable in the Assault.

CLOSING FORWARD AND BACKWARD.

Close to the Rear.

From second position bring right foot back to the left, assuming first position.

Close to the Front.

From second position bring left foot forward to right, assuming first position.

FOOT WORK.

Advance.

Advance by gliding the right foot a convenient distance, the left foot following with the same length step, without deranging the position of the body, sword-arm or blade. Both steps must be taken with the greatest rapidity, right foot always leading.

Retreat.

Step back with the left foot, instantly following with the right, without deranging the position of body, sword-arm and blade. Must be executed with the greatest rapidity, left foot always leading. To retreat without a motive is a fault.

PRACTICAL LESSON IN PRECEDING EXERCISES.

1. Half Face.
2. Pass to Guard, in seven movements.
3. Extend your sword-arm.
4. On Guard.
5. Extend your sword-arm.
6. Lunge.
7. Recover guard.
8. Advance, extend your sword-arm, lunge, recover guard, retreat.
9. Double advance, extend your sword-arm, lunge, recover guard, double retreat.
10. Two Appels.
11. Close to the rear.

FOOTBALL.

BY

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FOOTBALL UNION.

THERE are two kinds of football played, Association or "soccer" and Rugby football. Association football, which is one of the oldest games in the world, was originally introduced into Canada and the United States from England, where it leads all sports in point of popularity. Crowds of over one hundred thousand people at a final match show the hold the game has in England.

It is an ideal game for the fall or spring season of the year and is very easily learned. There is far less likelihood of injury than in the American or Canadian Rugby football game. Eleven players constitute a team, placed in the following positions: a goal keeper, two fullbacks, three halfbacks, and five forwards. The ball is round in shape, being an inflated rubber bladder covered with leather. The players with the exception of the goal keepers are not allowed to touch the ball with their hands or arms, but must kick it or "head" it. The field is from 110 yards to 120 yards long by about 75 yards wide with goal posts set at each end, 18 feet wide and 8 feet high. The object of the game is to kick the ball between the opposing goal posts. When the ball goes out of bounds on the side lines it is thrown back into play, and when it goes behind the goal lines it is kicked into play.

Several prominent English teams have visited Canada and the United States in recent years. Association football is played a great deal throughout Canada and in New York, Philadelphia, St. Louis, Chicago, Newark, and Fall River. Several of the universities have also introduced the game in recent years. A handsome trophy has been presented this year for competition for school teams in New York City, and the game is rapidly finding favor. Investigation has shown that the game is far more suitable for schoolboys than Rugby football.

There are at least five different styles of rules for Rugby football in Canada at the present time. The old English game with fifteen players on a side is played in British Columbia, Nova Scotia, and New Brunswick. In the Inter-Collegiate and Quebec Rugby Unions the teams are composed of fourteen men a side and the ball is scrimmaged as in the English game, only with fewer players in the "scrum." In Manitoba, fifteen players are used and the game is more like the English game. The Ontario game more closely resembles the American College game. Twelve players a side are used instead of eleven on each side, the extra player being utilized as a halfback. The ball is

snapped back to start the play from a scrimmage. There is no interference, however, and it has been found that this difference between the Ontario and American rules has lessened the chance for injury. The game is very popular in Ontario, where it has been played under the new rules for about six years.

FOOTBALL RULES.

(As adopted in 1898 by the University Athletic Club.)

EQUIPMENT, OFFICIALS, ETC.

RULE 1.—(a) The game shall be played upon a rectangular field, of the standard dimensions.

(b) The game shall be played by two teams of eleven men each.

(c) The officials shall be a referee, an umpire, and a linesman.

(d) The football used shall be of leather, enclosing an inflated rubber bladder. The ball shall have the shape of a prolate spheroid.

DEFINITION OF TERMS.

RULE 2.—(a) A *Drop-Kick* is made by letting the ball drop from the hands and kicking it the instant it rises from the ground.

(b) A *Place-Kick* is made by kicking the ball after it has been placed on the ground.

(c) A *Punt* is made by letting the ball drop from the hands and kicking it before it touches the ground.

(d) A *Kick-Off* is a place-kick from the centre of the field of play, and cannot score a goal. (Rule 8.)

(e) A *Kick-Out* is a drop-kick, place-kick, or punt made by a player of the side which has made a safety or a touchback.

(f) A *Free Kick* is a term used to designate any kick when the opponents are restrained by rule from advancing beyond a certain point.

RULE 3.—(a) The ball is *Out of Bounds* when it or any part of the player who holds the ball touches the ground on or outside the side line or side line extended.

(b) If the ball is kicked so that it goes out of bounds before crossing the opponents' goal line, it shall belong to the opponents. If, however, it strikes any player who is on-side, and then goes out of bounds, it shall belong to the player who first obtains possession of it.

RULE 4.—(a) A *Touchdown* is made when the ball in possession of a player is declared dead by the Referee, any part of it being on, over, or behind the opponents' goal line.

(b) The point where the touchdown is marked, however, is not where the ball is carried across the line, but where the ball is fairly held or called "down."

(c) A *Touchback* is made when the ball in possession of a player guarding his own goal is declared dead by the Referee, any part of it being on, over, or behind the goal line, provided the impetus which sent it to or across the line was given by an opponent.

(d) A *Safety* is made when the ball in the possession of a player guarding his own goal is declared dead by the Referee, any part of it being on, over, or behind the goal line, provided the impetus which caused it to pass from outside the goal to or behind the goal line was given by the defending side.

RULE 5.—A *Punt-Out* is a punt made by a player of the side which has made a touchdown to another of his own side for a fair catch.

RULE 6.—(a) A *Scrimmage* takes place when the holder of the ball places it upon the ground and puts it in play by kicking it forward or snapping* it back.

(b) If, after the snapper-back has taken his position, he should voluntarily move the ball as if to snap it, the scrimmage has begun.

(c) When snapping the ball back, the player so doing must be on-side, the hand or foot used in snapping the ball excepted. (Rule 10.)

RULE 7.—(a) A *Fair Catch* consists in catching the ball after it has been kicked by one of the opponents and before it touches the ground, or in similarly catching a punt-out by another of the catcher's own side, provided the player, while making the catch, makes a mark with his heel. It is not a fair catch if the ball, after the kick, was touched by another of his side before the catch. Opponents who are off-side shall not interfere in any way with a player attempting to make a fair catch, nor shall he be thrown to the ground after such catch is made unless he has advanced beyond his mark.

(b) If a side obtains a fair catch, the ball must be put in play by a punt, drop-kick, or place-kick, and the opponents cannot come within ten yards of the line on which the fair catch was made; the ball must be kicked from some point directly behind the spot where the catch was made, on a line parallel to the side line.

*Snapping the ball means putting it back by hand or foot with one quick and continuous motion from its position on the ground.

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RULE 8.—A *Goal* is made by kicking the ball in any way, except by a punt, from the field of play over the crossbar directly over one of the uprights of the opponents' goal.

RULE 9.—*Charging* is rushing forward to seize or block the ball or to tackle a player.

RULE 10.—(a) In a scrimmage no part of any player shall be ahead of the ball when it is put in play. (Exception under Rule 8, c.)

(b) A player is put off-side if the ball in play has last been touched by one of his own side behind him. No player, when off-side, shall touch the ball except on a fumble or a muff, nor shall he interrupt or obstruct an opponent with his hands or arms until again on-side. No player can, however, be called off-side behind his own goal line.

(c) A player being off-side is put on-side when the ball has touched an opponent, or when one of his own side has run in front of him, either with the ball, or having been the last player to touch it when behind him.

(d) If the ball, when not in possession of either side, is touched when inside the opponents' ten-yard line by a player who is off-side, it shall go as a touch-back to the defenders of that goal.

RULE 11.—The ball is *Dead*:

(a) Whenever the Referee or Umpire blows his whistle or declares a down.

(b) When the Referee has declared that a down, touchdown, touchback, safety, or goal has been made.

(c) When a fair catch has been heeled.

(d) When it has been downed after going out of bounds.

RULE 12.—(a) The length of the game shall be 70 minutes, divided into two halves of 35 minutes each, exclusive of time taken out. There shall be ten minutes' intermission between the two halves.

(b) The game shall be decided by the score at the end of the two halves.

(c) Time shall not be called for the end of a half until the ball is dead, and in case of a touchdown, the try-at-goal shall be allowed.

(d) Time shall be taken out whenever the game is unnecessarily delayed or while the ball is being brought out for a try-at-goal, kick-out, or kick-off, or when play is for any reason suspended by the Referee or Umpire. Time shall begin again when the ball is actually put in play.

(e) No delay shall continue more than two minutes.

RULE 13.—(a) The captains shall "toss up" before the beginning of the game, and the winner of the toss shall have his choice of goal or kick-off. The ball shall be kicked off at the beginning of each half. Whenever a goal, following a touchdown, has been tried or a goal from the field has been kicked, the side defending that goal shall kick off. The teams shall change goals at the beginning of the second half. The same side shall not kick off at the beginning of two successive halves.

(b) At kick-off, if the ball goes out of bounds before it is touched by an opponent, it shall be brought back and kicked off again. If it is kicked out of bounds a second time it shall go as kick-off to the opponents. If either side thus forfeits the ball twice, it shall go to the opponents, who shall put it in play by a scrimmage at the centre of the field.

(c) At kick-off, if the ball is kicked across the goal line and is there declared dead when in the possession of one of the defending side, it is a touchback. If it is declared dead thus in possession of the attacking side, it is a touchdown.

(d) At kick-off and on a kick from a fair catch, the opposite side must stand at least ten yards in front of the ball until it is kicked. On a kick-out, the opposite side cannot stand nearer the goal than the 25-yard line, except on a kick-out made after a drop-kick upon the first down inside the 25-yard line, when the 15-yard line is the restraining mark. (See Rule 23, exception.)

RULE 14.—(a) The side which has a free kick must be behind the ball when it is kicked.

(b) In the case of a kick-off, kick-out, or kick from a fair catch, the ball must be kicked a distance of at least ten yards towards the opponents' goal from the line restraining the player making the kick, unless it is stopped by an opponent; otherwise the ball is not in play.

RULE 15.—(a) Charging is lawful, in case of a punt-out or kick-off, as soon as the ball is kicked; and the opponents must not charge until the ball is kicked.

(b) In case of any other free kick, charging is lawful: (1) When the player of the side having the free kick advances beyond his restraining line or mark with the ball in his possession; (2) When he has allowed the ball to touch the ground by accident or otherwise.

(c) If such lawful charging takes place, and if the side having the free kick fails to kick the ball, then the opponents may line up five yards ahead of the line which restrained them before charging. In that case, the side having the free kick must kick the ball from some point directly behind its mark, if the free kick resulted from a fair catch, and in other cases from behind the new restraining line.

RULE 16.—(a) The snapper-back is entitled to full and undisturbed possession of the ball. The opponents must neither interfere with the snapper-back nor touch the ball until it is actually put in play.

(b) In snapping the ball back, if the player so doing is off-side, the ball must

be snapped again, and if this occurs again on the same down the ball goes to the opponents.

(c) The man who snaps back and the man opposite him in the scrimmage cannot afterward touch the ball until it has touched some player other than these two.

(d) If the man who puts the ball in play in a scrimmage kicks it forward, no player of his side can touch it until it has gone ten yards into the opponents' territory, unless it be touched by an opponent.

(e) The man who first receives the ball when it is snapped back shall not carry the ball forward beyond the line of scrimmage unless he has regained it after it has been passed to and has touched another player.

RULE 17.—(a) Before the ball is put in play no player shall lay his hands upon, or by the use of his hands or arms interfere with, an opponent in such a way as to delay putting the ball in play.

(b) After the ball is put in play, the players of the side that has the ball may obstruct the opponents with the body only, except the player running with the ball, who may use his hands and arms.

(c) The players of the side not having the ball may use their hands and arms, but only to get their opponents out of the way in order to reach the ball or stop the player carrying it.

RULE 18.—(a) Before the ball is put in play in a scrimmage, if any player of the side which has the ball takes more than one step in any direction, he must come to a full stop before the ball is put in play.

When the ball is put in play by a scrimmage:

(b) At least five players of the side having the ball must be on the line of scrimmage.

(c) If five players, not including the quarter back, are behind the line of scrimmage and inside of the positions occupied by the players at the ends of said line, then two of these players must be at least five yards back of this line, but all of these players may be nearer than five yards to the line of scrimmage if two of them are outside the positions occupied by the players at the ends of said line.

RULE 19.—A player may throw, pass, or bat the ball in any direction except towards his opponents' goal.

RULE 20.—(a) If a player having the ball is tackled, and the movement of the ball stopped, or if the player cries "down," the Referee shall blow his whistle, and the side holding the ball shall put it down for a scrimmage.

(b) As soon as a runner attempting to go through is tackled and goes down, being held by an opponent, or whenever a runner having the ball in his possession cries "down," or if he goes out of bounds, the Referee shall blow his whistle, and the ball shall be considered down at that spot.

(c) There shall be no piling up on the player after the Referee has declared the ball dead.

RULE 21.—(a) If, in three consecutive downs (unless the ball crosses the goal line), a team has neither advanced the ball five yards nor taken it back twenty yards, it shall go to the opponents on the spot of the fourth down.

(b) When a distance penalty is given, the ensuing down shall be counted the first down.

RULE 22.—If the ball goes out of bounds, whether it bounds back or not, a player of the side which secures it must bring it to the spot where the line was crossed, and there either

(a) Touch it in with both hands at right angles to the side line and then kick it; or

(b) Walk out with it at right angles to the side line, any distance not less than five or more than fifteen yards, and there put it down for a scrimmage, first declaring how far he intends walking.

RULE 23.—A side which has made a touchback or a safety must kick out, from not more than twenty-five yards outside the kicker's goal. If the ball goes out of bounds before striking a player, it must be kicked out again, and if this occurs twice in succession, it shall be given to the opponents as out of bounds on the twenty-five-yard line on the side where it went out. At kick-out, the opponents must be on the twenty-five-yard line or nearer their own goal, and the kicker's side must be behind the ball when it is kicked. Should a second touchback occur before four downs have been played, the side defending the goal may have the choice of a down at the twenty-five-yard line, or a kick-out.

RULE 24.—(a) A side which has made a touchdown must try at goal, either by a place-kick or a punt-out.

(b) After the try-at-goal, whether the goal be made or missed, the ball shall go as a kick-off at the centre of the field to the defenders.

RULE 25.—(a) If the try be by a place-kick, player of the side which has made the touchdown shall hold the ball for another of his side to kick at some point outside the goal on a line parallel to the side line passing through the point where the touchdown was declared. The opponents must remain behind their goal line until the ball has been placed upon the ground.

(b) If the try-at-goal is to be preceded by a punt-out, the punter shall kick the ball from the point at which the line parallel to the side line, and passing through the spot of the touchdown, intersects the goal line. The players of his side must stand in the field of play not less than five yards from the goal line.

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(c) The opponents may line up anywhere on the goal line except within the space of ten feet on each side of the punter's mark, but they cannot interfere with the punter. If a fair catch be made from a punt-out, the mark shall serve to determine the positions as the mark of any fair catch, and the try-at-goal shall then be made by a place-kick from this spot, or any point directly behind it. If a fair catch be not made on the first attempt, the ball shall go as a kick-off at the centre of the field to the defenders.

(d) The holder of the ball in any place-kick may be off-side or out of bounds without vitiating the kick.

RULE 26.—The following shall be the values of plays in scoring: Goal obtained by touchdown, 6 points; goal from field kick, 5 points; touchdown failing goal, 5 points; safety by opponents, 2 points.

RULE 27.—(a) No one having projecting nails or iron plates on his shoes, or wearing upon his person any metallic or hard substance that in the judgment of the Umpire is liable to injure another player, shall be allowed to play in a match. No sticky or greasy substance shall be used on the persons of the players.

(b) A player may be substituted for another at any time at the discretion of the captain of his team, and the player who has been replaced cannot return to the game.

(c) There shall be no tripping or tackling below the knees.

PENALTIES.

RULE 28.—A foul is any violation of a rule. [The latest rules prescribe minutely the penalties for each kind of foul. In general, when the offending side has the ball, it is punished by being made to surrender it to the other side; if not, the ball is advanced from 5 to 15 yards.]

DUTIES OF OFFICIALS.

I.—The Referee.

RULE 29.—The Referee is responsible for the enforcement of Rules 1, 2, 3, 4, 5, 6 (a and b); 7 (except as relates to interference, throwing catcher, and positions of players); 8, 11, 12, 13 (except d); 14, b; 16 e; 19, 20 (a and b); 21, 22, 23 (except as relates to positions of players); 24, 25 (except as relates to positions of players and interference); 26.

In making his decisions the Referee must recognize and allow precedence to any penalty inflicted by the Umpire for a foul.

The Referee's decisions are final upon all points not specified in the duties of the Umpire.

The Referee shall see that the ball is properly put in play, and he is judge of its position and progress.

At the beginning of a game and after time has been taken out, he shall ascertain from each captain that his team is ready before ordering play.

He is sole authority for the score of the game and is judge of forfeiture of the game under the rules.

The Referee may appeal to the Umpire and Linesman for testimony.

II.—The Umpire.

The Umpire is responsible for the enforcement of all rules whose infringement is punishable by a distance penalty or by the surrender of the ball to the opponents, except 13, b; 16, e; 19, and 23, viz.: Rules 6, c; 9, 10, 13 d; 14 a; 15, 16 (except e); 17, 18, 20, c; 27.

The Umpire is judge of the conduct of the players, and his decision is final regarding such fouls as are not specifically placed within the jurisdiction of the Referee.

The Umpire is judge of charging and of the positions of players whenever the ball is put in play.

He may appeal to both the Referee and Linesman for testimony in cases of fouls seen by them.

The Umpire shall not blow his whistle nor declare the ball dead, nor call time, except to grant a penalty for a foul committed.

III.—The Linesman.

The Linesman shall, under the supervision of the Referee, mark the distances gained or lost in the progress of the play.

He shall be provided with two assistants, who shall remain outside the field of play and who shall use, in measuring distance, a rope or chain.

The Linesman shall, under the direction of the Referee, also keep the time and shall notify the captains of the time remaining for play, not more than ten nor less than five minutes before the end of each half.

GOLF—CHARACTERISTICS AND STYLE.

BY

HON. R. H. LYTTELTON.

GOLF is a game for individuals, but not for a side. No golfer ever became first-rate who did not begin the game early. The boy, however, should learn not at school, but in the holidays. He can learn how to swing and get a true and good style, and having got this it will do him no harm to put the game aside for a time; and in the meanwhile play the games suitable for youths, where self is kept under, and the interests of the side and comradeship prevail—rowing, football, and cricket.

Golfers of the old school scorn the idea that golf is a game for middle age and old age. If the question is sifted to the bottom, it may readily be said that inasmuch as golf can be played by men and women to really an advanced age, it is a game for age as opposed to youth. Rowing, football, hockey, and polo are really for the period of life that ends at thirty. Cricket in moderation may go on to forty, but golf may be played in foursomes, and one round a day style, by men as long as they can walk. The drives become shorter and the handicap gets longer; but as the famous old St. Andrews player, Tom Morris, and the late Mr. Whyte Melville show, you can play to eighty years of age if lumbago and rheumatism, and active disease which, of course, prevents everything, do not interfere. Golf is a very great game on account of its elasticity. The youth may play it in such a way that it becomes a test of physical endurance that only youth can stand; but the old and comparatively feeble can also play it, and play it well, with intense enjoyment, because the game adapts itself to practically every physical condition. I know no other outdoor game of which this can be said. There are men who play county cricket after fifty years of age, but they are very few in number, and to field out all day in hot weather at that age is weariness and a burden. Here is one of the reasons why golf has been taken to with a vigor and force that certainly is the most astonishing feature in the history of games that I have any experience of at all.

I have said that nobody can become a really first-rate golfer who has not begun the game early in life. I believe this to be absolutely true; but it is equally true that a very respectable skill can be acquired by men whose eye and muscles are attuned to games, if they have never handled a club till thirty years old. Mr. Charles Hutchings of Holylake, I believe, began when he was well over thirty years of age, and he became good enough to win a St. Andrews medal, but this is a very exceptional case, and I dare believe that Mr. Hutchings himself would admit that he could not be put quite in the same class with Messrs. Ball, Laidlay, Tait, and Hutchinson.

From "Out-Door Games—Cricket and Golf," London, J. M. Dent & Co.

One reason why a moderate and more than fair skill is possible to the golfer who begins late is that quickness and agility of eye are not indispensable qualities for the game any more than are rapidity and suppleness of limb. The golfer is never obliged to run or jump, and he has not to stoop to an inordinate extent. In one sense it is a game of repose; to hit a ball ninety or a hundred times in two hours may be said to be a somewhat leisurely performance. Some of the strokes are given with scarcely an effort, such as all puts and little quarter shots. An analysis of the game will prove that a fair player will only have to put forth his full strength on an average about thirty-six times during a round, or twice per hole, a first-rate player less. Vardon and Mr. Tait, I suppose, only find a minority of holes where it is necessary to do more than a full shot, and then a three-quarter or half shot, and some holes they can drive off the tee with a half-swing. An inferior player wastes a superhuman amount of muscle with singularly little result of distance, though often the ball goes a long way, but off the line. The worse, however, a player is, the greater is the effort; he is often in bunkers and the niblick has generally to be wielded with all the force at his command; playing a hole of over 300 yards and fozzling one or more strokes cost the bad player far more exertion than Vardon has to expend at the same hole. But every player, good, bad, indifferent, will find that the hitting of the ball is what gives the fatigue and makes the exercise. You will find the difference at once if you walk round and follow a match, when the distance covered is exactly the same as that traversed by the players; the players will be more or less fatigued, the spectator not at all.

Another charm of golf to the beginner of thirty years of age "which leads him to pursue the game with the ardor of youth" is in the fact he can progress and improve. This would be impossible in cricket, for even slight progress would be out of the question. At golf, however, I believe it to be quite possible to improve your game till you get to fifty, whilst from fifty to sixty you may not go back even if you do not go forward. From sixty onwards you can find refuge in foursomes as long as you can walk and lumbago and rheumatism are absent. Nobody will really get enthusiastic about any game or pursuit where the element of progress is impossible. The sportsman whose shooting deteriorates gradually but surely, will transfer his license to his son; the cricketer who cannot raise ten runs, and whose function is watching his own side from the tent and his opponent under a hot sun and fielding out, will give up the game and become a spectator. But improvement at golf is quite within the reach of many, because agility and quickness are not requisite, but rather the reverse. This element of progress is a highly important feature, and largely accounts for the popularity of the game.

As years go on, a man's golf undergoes changes. A player's stance has to be altered gradually when his rapidly-changing figure makes

a view of his feet not always easy. When younger he prided himself on the length of his drive, but golf provides compensation for the very material abbreviation that inevitably comes to the drive of the middle-aged. Experience is the great thing in all games, but in none more than in golf. The older player frequently finds that it is impossible to improve with the irons and putters if he deteriorates with the driver and brasseys. Nothing appears to me to be more true than that to win a match the short game must be good. I have watched several great matches and read about them also, and in nine cases out of ten the man who puts well is the man who wins. I do not say that this is always the case. Vardon, for instance, seems to me to be no better than several others in putting and lifting shots, but he wins his matches by his steady long drive, and by the still more tremendous length of his second shot through the green, and the consequence is that Vardon is always playing the like on the putting-green. But the histories of matches are very much the same. A was short in his approach put, and took three to hole out; B, on the contrary, laid a long put dead and won the hole. It seems to me that the compensation an older player gets from his younger rival is in the fact that the older man plays with greater steadiness on the putting-green, and this superiority takes away all the advantage that is gained by greater length in the drives. The golfer who, when on the green, is always down in two strokes except when he is down in one, is the player who wins matches.

The game of golf should be played in a sportsmanlike and in a gentlemanly manner. One drawback to the game is that, on the whole, more than any other game, it seems to attract a great many who fail to come up to the ideal in either of these respects. Some of the rules seem to be drawn as if this was recognized to be the fact. Two men, both gentlemen, play a friendly game, and it would not occur to either of them to pay any attention to some of these absurd rules. Others play and angry discussion arises as to moving a bit of grass that may be growing, and therefore cannot be moved; or one man claims the hole because his opponent has pressed down the turf with his knuckles. In a high wind the ball moves before the player has touched it with his club, but after he has addressed it, this counts a stroke against the unfortunate player. These are instances of what I call absurd and pettifogging, low-attorney sort of rules. It would be far better that the rule about brushing the green lightly with the hand on the line of the put were abolished altogether. If there are players who take a mean advantage and flatten down a lump when they should only be brushing away loose bits of dust or stones, such players had better be provided for if such a thing can be brought about without hardship to the sportsmanlike golfers. The benefit to the putter of brushing away dust or small stones is, in my opinion, infinitesimal. Greens are kept in good order by the greenkeeper, so let every player take his chance of the green, and make it unlawful to

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brush away dust or remove what is not growing, and the swindler will be defeated.

The whole question of rules in games is interesting. Some rules there must always be, but if the game is to be played in a right spirit the fewer there are the better. At golf there are so many rules which seem to be both pedantic and absurd that in a friendly game they are quietly ignored. Nobody of proper feeling will claim a hole because his opponent's caddie has sheltered the ball from the wind with his body, or because the ball has been moved by the wind after the player has put himself in a certain attitude, though he has no more touched it than he has the moon. Golf, indeed, has come to be so much hedged round by rules that these defeat their own object, and by respectable people are ignored. It always appears to me that rules of any game should be such that it is to the advantage of the game that they should be enforced always and by everybody. Whist, for instance, has a code of rules that seem to be so reasonable that they are all of them enforced, and nobody who insists on the letter of the law at whist is thought the worse of, or guilty of sharp practice. But at golf such is not the case, and the man who exacts extreme penalties is a gentleman who is generally to be found searching in vain for an opponent.

At cricket you may play against any eleven, and you may enjoy your game. But golf is a painful game when played against an opponent of a certain type. The sulky player who is moody and never smiles, the fierce-tempered man who makes you miserable while he curses his caddie who has not the right of reply, the man who seems to be caring for nothing except for his own welfare and is barely civil to you, and, lastly, the man with a total absence of humor. I am quite aware of the fact that in Scotland it is generally the practice not to talk or utter a sound during any part of the game. I can only say on this point that a game is a game, and if a reasonable amount of cheerful conversation can be indulged in without injury to the play so much the better.

When everything has been said, however, the fact remains that golf is a splendid game, and has, moreover, a charm impossible to describe or exaggerate. Why this is, what it consists of, is not easy to say. In the first place there is the glorious sensation of making a true hit. This is not only true of the drive. There is a right or wrong way of hitting a yard put. The right way is bliss, the wrong purgatory. Of course the pleasure of the long drive or second shot through the green gives as fine an emotion as is possible for any sinner to receive on this earth, but there is satisfaction to be got out of every true hit of whatever length.

Then there is the charm of scenery, though I admit that to many the game is so engrossing that if eighteen holes could be found in the Desert of Sahara as good as at North Berwick, some would as soon play on one as the other. Lastly, there is the indescribable

charm of uncertainty. You cannot in golf ever be quite certain how the ball will lie except on the tee and putting-green. You experience during your walk of 150 yards to the ball alternate feelings of hope and fear, hope that the ball is lying on a smooth place and easy to hit, fear that it is in a cup or has a lump behind it. There is also the uncertainty that has a twinge of agony about it, and that is the question how you are going to hit it; even the best players fizzle sometimes. Without uncertainty there is no really first-class game where a ball is concerned; and to the charm of a fine hit, picturesque scenery, and uncertainty, the charm of companionship has still to be added. Nobody can wonder that golf has added to the gaiety of nations.

RULES OF GOLF.

AS ADOPTED BY THE UNITED STATES GOLF ASSOCIATION WITH THE RULINGS AND INTERPRETATIONS MADE BY THAT BODY.

RULE 1.—DEFINITIONS: (a) The game of golf is played by sides, each playing its own ball. A side consists either of one or of two players. If one player play against another, the match is called "a single." If two play against two, it is called "a foursome." A single player may play against two, when the match is called a "threesome," or three players may play against each other, each playing his own ball, when the match is called "a three-ball match."

"Match play" is decided by the number of holes won.

"Medal play" is decided by the aggregate number of strokes.

"Col. Bogey" is an imaginary opponent, against whose arbitrary score each competitor plays by holes; otherwise bogey competitions are governed by the special rules for stroke competitions, except that a competitor loses the hole:

When his ball is lost;

When his ball is not played where it lies, except as otherwise provided for in the rules.

(b) The game consists in each side playing a ball from a teeing ground into a hole by successive strokes, and the hole is won by the side which holes its ball in fewer strokes than the opposite side, except as otherwise provided for in the rules. If the sides hole out in the same number of strokes, the hole is halved. In competitions:

In match play, when two competitors have halved their match, they shall continue playing hole by hole till one or the other shall have won a hole, which shall determine the winner of the match.

Should the match play competition be a handicap, the competitors must decide the tie by playing either one hole, three or five more holes, according to the manner in which the handicap ceded falls upon certain holes so as to make the extra holes a fairly proportionate representation of the round.

In medal play, when two or more competitors are tied, the winner shall be determined by another round of the course; except that by-laws 15 and 19 of the United States Golf Association provide that, in case of ties for the 16th place in the amateur championship medal rounds, or the eighth place in the women's championship medal rounds, respectively, the contestants so tied shall continue to play until one or the other shall have gained a lead by strokes, the hole or holes to be played out.

(c) The teeing-ground shall be indicated by two marks placed in a line, as nearly as possible at right angles to the course.

The hole shall be 4 1/4 inches in diameter, and at least 4 inches deep.

(d) The term "putting-green" shall mean all ground within 20 yards of the hole, except hazards.

(e) A "hazard" shall be any bunker, water (except casual water), sand, path, road, railway, whin, bush, rushes, rabbit scrape, fence, or ditch. Sand blown on to the grass, or sprinkled on the course for its preservation, bare patches, snow, and ice are not hazards. Permanent grass within a hazard shall not be considered part of the hazard.

(f) The term "through the green" shall mean all parts of the course except "hazards" and the putting-green which is being played to.

(g) The term "out of bounds" shall mean any place outside the defined or recognized boundaries of the course.

(h) "Casual water" shall mean any temporary accumulation of water (whether caused by rainfall or otherwise) which is not one of the ordinary and recognized hazards of the course.

(i) A ball shall be "in play" as soon as the player has made a stroke at the teeing-ground in each hole, and shall remain in play until holed out, except when lifted in accordance with the Rules.

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(j) A ball shall be considered to have "moved" only if it leave its original position in the least degree, and stop in another; but if it merely oscillate, without finally leaving its original position, it shall not be considered to have "moved."

(k) A ball shall be considered "lost" if it be not found within five minutes after the search for it is begun.

(l) A "match" shall consist of one round of the links, unless it be otherwise agreed.

A match is won by the side which is leading by a number of holes greater than the number of holes remaining to be played. If each side win the same number of holes, the match is halved.

(m) A "stroke" shall be any movement of the ball caused by the player, except as provided for in rule 4, or any downward movement of the club made with the intention of striking the ball.

(n) A "penalty stroke" is a stroke added to the score of a side under certain rules, and shall not affect the rotation of play.

(o) The privilege of playing first from the teeing-ground is called "the honor."

(p) "Addressing the ball" shall mean that a player has taken up his position and grounded his club, or if in a hazard, that he has taken up his position preparatory to striking the ball.

(q) The reckoning of the strokes is kept by the terms—"the odd," "two more," "three more," etc., and "one off three," "one off two," "the like." The reckoning of holes is kept by the terms—so many "holes up," or "all even," and so many "to play."

RULE 2.—A match begins by each side playing a ball from the first teeing-ground.

The player who shall play first on each side shall be named by his own side.

The option of taking the honor at the first teeing-ground shall be decided, if necessary, by lot.

A ball played from in front of, or outside of, or more than two club lengths behind the two marks indicating the teeing-ground, or played by a player when his opponent should have had the honor, may be at once recalled by the opposite side, and may be re-teeed.

The side which wins a hole shall have the honor at the next teeing-ground. If a hole has been halved the side which had the honor at the last teeing-ground shall again have the honor.

On beginning a new match the winner of the long match in the previous round shall have the honor, or if the previous match was halved the side which last won a hole shall have the honor.

Penalty for playing a ball outside of the limits of teeing-ground:

In match play, the ball may be at once recalled by the opponent, no stroke being counted for the misplay.

In medal play, disqualification.

Penalty for leading off the tee out of turn:

In match play, the ball may be at once recalled by the opponent, no stroke being counted for the misplay.

In medal play, no penalty—but it is customary in medal play to observe the honor.

RULE 3.—A player shall not play while his ball is moving, under the penalty of the loss of the hole. But if the ball begin to move while the player is making his upward or downward swing he shall incur no penalty, except as provided for in rules 10, 18, and 27, and a stroke lost under rule 27 shall not in these circumstances be counted as a stroke of the player.

Penalty for playing a moving ball (except at the tee):

In match play, loss of the hole.

In medal play, two strokes.

But if the ball move while the player is making his upward or downward swing a penalty is only incurred if the player is deemed to have caused it to move, under rules 10 and 18, by moving or touching any loose impediment, or under rule 27, by grounding his club, or in a hazard, by taking his stand to play it, in which cases the penalty shall be:

In match play, one stroke.

In medal play, one stroke.

RULE 4.—If the ball fall or be knocked off the tee in addressing it, no penalty shall be incurred, and it may be replaced, and if struck when moving no penalty shall be incurred.

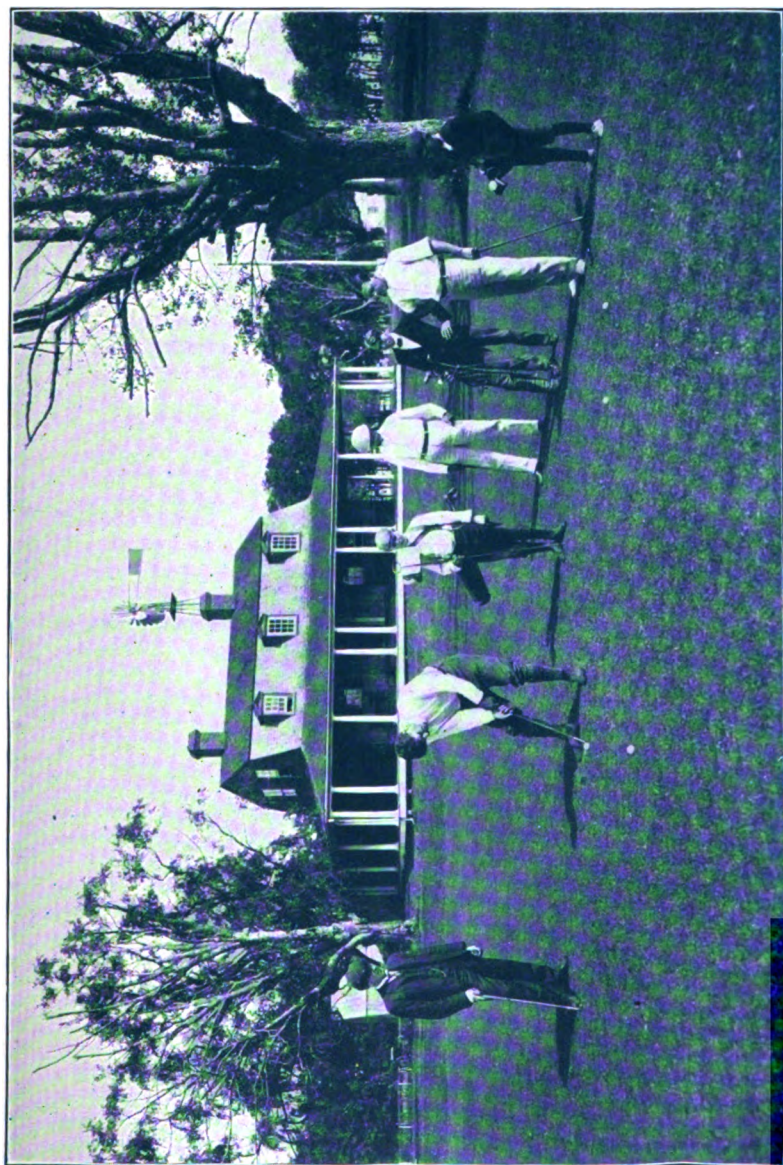
RULE 5.—In a threesome or foursome the partners shall strike off alternately from the teeing-grounds, and shall strike alternately during the play of the hole. If a player play when his partner should have done so, his side shall lose the hole.

Penalty:

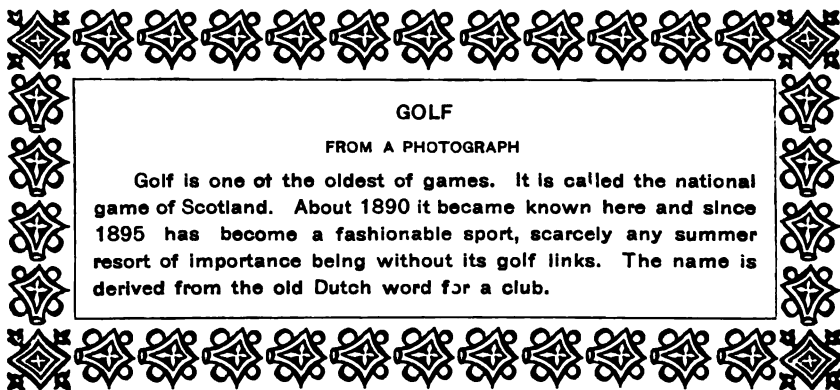
In match play, loss of the hole.

In medal play, two strokes.

RULE 6.—When the balls are in play, the ball farthest from the hole which the players are approaching shall be played first, except as otherwise provided for in the rules. If a player play when his opponent should have done so, the opponent may at once recall the stroke. A ball so recalled shall be dropped as near as possible to the place where it lay, without penalty.



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GOLF

FROM A PHOTOGRAPH

Golf is one of the oldest of games. It is called the national game of Scotland. About 1890 it became known here and since 1895 has become a fashionable sport, scarcely any summer resort of importance being without its golf links. The name is derived from the old Dutch word for a club.

"Otherwise provided for" in rule 32, and medal rule 11.

Penalty for playing out of turn:

In match play, ball may be at once recalled by the opponent, no stroke being counted for the misplay.

In medal play, no penalty—the ball may not be recalled.

RULE 7.—The ball must be fairly struck at, not pushed, scraped or spooned, under penalty of the loss of the hole.

Penalty:

In match play, loss of the hole.

In medal play, two strokes.

RULE 8.—A ball must be played wherever it lies or the hole be given up, except as otherwise provided for in the rules.

"Otherwise provided for" in rules 9, 11, 13, 15, 17, 22, 23, 28, 31, 32, 34.

Penalty:

In match play, loss of the hole.

In medal play, two strokes, except otherwise provided for in medal rules 6, 8, 9, 10, 11.

RULE 9.—Unless with the opponent's consent, a ball in play shall not be moved or touched before the hole is played out, under penalty of one stroke, except as otherwise provided for in the rules. But the player may touch his ball with his club in the act of addressing it without penalty.

If the player's ball move the opponent's ball through the green, the opponent, if he choose, may drop a ball (without penalty) as near as possible to the place where it lay, but this must be done before another stroke is played.

"Otherwise provided for" in rules 11, 13, 15, 17, 22, 23, 28, 31, 32, 34, and medal rules 6, 8, 9, 10, 11.

Penalty:

In match play, for moving or touching, one stroke.

In medal play, one stroke.

If a competitor's ball be displaced by another competitor's ball it must be replaced, or its owner shall be disqualified.

RULE 10.—Any loose impediment (not being in or touching a hazard) which is within a club length of the ball may be removed. If the player's ball move after any such loose impediment has been touched by the player, his partner, or either of their caddies, the penalty shall be one stroke. If any loose impediment (not being on the putting-green) which is more than a club length from the ball be removed, the penalty shall be the loss of the hole.

Penalty for ball moved (not in hazard) after removing loose impediment within club length of the ball:

In match play, one stroke.

In medal play, one stroke.

Throughout the green, for removing loose impediment more than a club length from the ball:

In match play, loss of the hole.

In medal play, two strokes.

RULE 11.—Any vessel, wheelbarrow, tool, roller, grass cutter, box, or similar obstruction may be removed. If a ball be moved in so doing, it may be replaced without penalty. A ball lying on or touching such obstruction, or on clothes, nets, or ground under repair or covered up or opened for the purpose of the upkeep of the links, may be lifted and dropped without penalty, as near as possible to the place where it lay, but not nearer the hole. A ball lifted in a hazard, under such circumstances, shall be dropped in the hazard.

A ball lying in a golf hole or flag hole, or in a hole made by the greenkeeper, may be lifted and dropped without penalty as near as possible to the place where it lay, but not nearer the hole.

"As near as possible" shall mean within a club length.

If a ball lie on or within a club length of a drain cover, water pipe, or hydrant, it may be lifted and dropped without penalty as near as possible to the place where it lay, but not nearer the hole.

RULE 12.—Before striking at a ball in play, the player shall not move, bend, or break anything fixed or growing near the ball, except in the act of placing his feet on the ground for the purpose of addressing the ball, in soiling his club to address the ball, and in his upward or downward swing, under penalty of the loss of the hole, except as otherwise provided for in the rules.

"Otherwise provided for" in rules 11, 13, 30.

Penalty:

In match play, loss of the hole.

In medal play, two strokes.

RULE 13.—When a ball lies in or touches a hazard, nothing shall be done to improve its lie; the club shall not touch the ground, nor shall anything be touched or moved before the player strikes at the ball, subject to the following exceptions: (1) The player may place his feet firmly on the ground for the purpose of addressing the ball; (2) In addressing the ball, or in the upward or downward swing, any grass, bent, whin, or other growing substance, or the side of a bunker, wall, paling, or other immovable obstacle may be touched; (3) Steps or planks placed in a hazard by the green committee for access to or egress from such hazard may be removed, and if a ball be moved in so doing, it may be replaced without penalty; (4) Any loose impediments may

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be removed from the putting-green: (5) The player shall be entitled to find his ball as provided for by rule 30. The penalty for a breach of this rule shall be the loss of the hole.

Penalty:

In match play, loss of the hole.

In medal play, two strokes.

RULE 14.—A player or caddie shall not press down or remove any irregularities of surface near a ball in play. Dung, worm casts, or mole hills may be removed (but not pressed down) without penalty. The penalty for a breach of this rule shall be the loss of the hole.

Penalty:

In match play, loss of the hole.

In medal play, two strokes.

Pressing down the surface behind the ball by prolonged or forcible grounding of the club shall be deemed a breach of this rule.

RULE 15.—If a ball lie or be lost in water, the player may drop a ball, under penalty of one stroke. But if a ball lie or be lost (1) in casual water through the green, a ball may be dropped without penalty; (2) in water in a hazard, or in casual water in a hazard, a ball may be dropped behind the hazard, under penalty of one stroke; (3) in casual water on a putting-green, a ball may be placed by hand behind the water, without penalty.

Penalty:

In match play, one stroke.

In medal play, one stroke.

A ball lifted from a recognized water hazard may be dropped under a penalty of one stroke, even if the hazard be dry at the time.

If the water in a recognized water hazard overflow its usual boundaries the overflowed portion of the course shall be considered as part of the hazard, and not as casual water.

If a ball lie or be lost in casual water in a hazard, a ball may be dropped without penalty, behind the water, but in the hazard, keeping the spot, where it entered the water, in line to the hole.

RULE 16.—When a ball has to be dropped, the player himself shall drop it. He shall face the hole, stand erect behind the hazard or casual water, keep the spot from which the ball was lifted (or in the case of water or casual water, the spot at which it entered) in a line between himself and the hole, and drop the ball behind him from his head, standing as far behind the hazard or casual water as he may please. If it be impossible to drop the ball behind the hazard or casual water, it shall be dropped as near as possible to the place where it lay, but not nearer the hole. If the ball so dropped touch the player dropping it, there shall be no further penalty, and if the ball roll into a hazard, it may be re-dropped without further penalty.

Penalty for a ball not dropped in accordance with this rule:

In match play, the opponent may call for the player to drop again; if the request be not complied with the player shall lose the hole.

In medal play, the ball must be dropped again or the competitor disqualified.

RULE 17.—When the balls lie within six inches of each other on a putting-green, or within a club length of each other through the green or in a hazard (the distance to be measured from their nearest points), the ball nearer the hole may, at the option of either the player or the opponent, be lifted until the other is played, and shall then be replaced as near as possible to the place where it lay. If the ball farther from the hole be moved in so doing, or in measuring the distance, it shall be replaced without penalty. If the lie of the lifted ball be altered by the player in playing, the ball may be placed in a lie as nearly as possible similar to that from which it was lifted, but not nearer the hole.

RULE 18.—Any loose impediments may be removed from the putting-green, irrespective of the position of the player's ball. The opponent's ball may not be moved except as provided for by the immediately preceding rule. If the player's ball move after any loose impediment lying within six inches of it has been touched by the player, his partner, or either of their caddies, the penalty shall be one stroke.

Penalty:

In match play, one stroke.

In medal play, one stroke.

RULE 19.—When the ball is on the putting-green the player or his caddie may remove (but not press down) sand, earth, dung, worm casts, mole hills, snow, or ice lying round the hole or in the line of his put. This shall be done by brushing lightly with the hand only across the put and not along it. Dung may be removed by a club, but the club must not be laid with more than its own weight upon the ground. The line of the put must not be touched, except with the club immediately in front of the ball, in the act of addressing it, or as above authorized. The penalty for a breach of this rule is the loss of the hole.

Penalty:

In match play, loss of the hole.

In medal play, two strokes.

The "line of the put" does not extend beyond the hole.

The "player or his caddie" shall include his partner or his partner's caddie.

RULE 20.—When the ball is on the putting-green, no mark shall be placed nor line drawn as a guide. The line of the put may be pointed out by the player's caddie, his partner, or his partner's caddie, but the person doing so must not touch the ground.

The player's caddie, his partner, or his partner's caddie, may stand at the hole, but no player nor caddie shall endeavor, by moving or otherwise, to influence the action of the wind upon the ball.

The penalty for a breach of this rule is the loss of the hole.

Penalty:

In match play, loss of the hole.

In medal play, two strokes.

RULE 21.—When on the putting-green, a player shall not play until the opponent's ball is at rest, under penalty of one stroke.

Penalty:

In match play, one stroke.

In medal play, one stroke.

RULE 22.—Either side is entitled to have the flag-stick removed when approaching the hole. If the ball rest against the flag-stick when in the hole, the player shall be entitled to remove the stick, and, if the ball fall in, it shall be deemed as having been holed out at the last stroke. If the player's ball knock in the opponent's ball, the latter shall be deemed as having been holed out at the last stroke. If the player's ball move the opponent's ball, the opponent, if he choose, may replace it, but this must be done before another stroke is played. If the player's ball stop on the spot formerly occupied by the opponent's ball, and the opponent declare his intention to replace, the player shall first play another stroke, after which the opponent shall replace and play his ball. If the opponent's ball lie on the edge of the hole, the player, after holing out, may knock it away, claiming the hole if holing at the like, and the half if holing at the odd, provided that the player's ball does not strike the opponent's ball and set it in motion. If after the player's ball is in the hole, the player neglect to knock away the opponent's ball, and it fall in also, the opponent shall be deemed to have holed out at his last stroke.

Penalty—If player's ball knock in the other ball:

In match play, the latter shall be counted as holed out in the last stroke.

In medal play, the latter must be replaced or its owner disqualified.

—If player's ball displace the other ball:

In match play, the other ball may be replaced at its owner's option, but this must be done before another stroke is played.

In medal play, the other ball must be replaced or its owner disqualified.

RULE 23.—If a ball in motion be stopped or deflected by any agency outside the match, or by the forecaddie, the ball must be played from where it lies, and the occurrence submitted to as a "rub of the green." If a ball lodge in anything moving, a ball shall be dropped as near as possible to the place where the object was when the ball lodged in it, without penalty. If a ball at rest be displaced by any agency outside the match, excepting wind, the player shall drop a ball as near as possible to the place where it lay, without penalty. On the putting-green the ball shall be replaced by hand, without penalty.

Ball at rest displaced:

In match play, must be dropped, or if on putting-green replaced, as near as possible to where it lay, or the hole shall be lost.

In medal play, must be replaced as near as possible to where it lay, or its owner must be disqualified.

RULE 24.—If the player's ball strike or be moved by an opponent or an opponent's caddie or clubs, the opponent shall lose the hole.

Penalty incurred:

In match play, loss of the hole.

In medal play, no penalty.

If the player's ball strike the other competitor or his caddie or clubs, it is a "rub of the green," and the ball shall be played from where it lies. If a player's ball at rest be moved by the other competitor or his caddie, the ball must be replaced or the player disqualified.

RULE 25.—If the player's ball strike or be stopped by himself or his partner, or either of their caddies or clubs, his side shall lose the hole.

Penalty:

In match play, loss of the hole.

In medal play, one stroke.

RULE 26.—If the player, when making a stroke, strike the ball twice, the penalty shall be one stroke.

Penalty:

In match play, one stroke.

In medal play, one stroke.

RULE 27.—If the player, when not intending to make a stroke, or his partner or either of their caddies, move his or their ball, or by touching anything cause it to move, when it is in play, the penalty shall be one stroke. If a ball in play move, after the player has grounded his club in the act of addressing it, or, when in a hazard, if he has taken up his stand to play it, he shall be deemed to have caused it to be moved, and shall lose a stroke, which shall be counted as a stroke of the player, except as provided in Rule 3.

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Penalty for moving the ball or causing it to be moved as under rules 10 and 18:
In match play, one stroke.

In medal play, one stroke.

RULE 28.—If a player play the opponent's ball, his side shall lose the hole, unless (1) the opponent then play the player's ball, whereby the penalty is cancelled, and the hole must be played out with the balls thus exchanged, or (2) the mistake occur through wrong information given by the opponent or his caddie, in which case there shall be no penalty, but the mistake, if discovered before the opponent has played, must be rectified by placing a ball as near as possible to the place where the opponent's ball lay.

If it be discovered before either side has struck off from the next teeing-ground (or, after playing the last hole in the match, before any of the players have left the green) that one side has played out the hole with the ball of a party not engaged in the match, that side shall lose that hole.

Penalty for breach of this rule:

First.—Playing the opponent's ball with exceptions (1) and (2) above noted in the rule:

In match play, loss of the hole.

In medal play, no penalty. The ball must be replaced.

Second.—Playing out with the ball of a party not engaged in the match:

In match play, if discovered before the next tee stroke, loss of the hole.

In medal play, the player must go back and play his own ball, or, not finding it, return as near as possible to the spot where it was last struck, tee another ball and lose a stroke (rule 6, medal play) or else be disqualified.

RULE 29.—If a ball be lost, except as otherwise provided for in the rules, the player's side shall lose the hole; but if both balls be lost the hole shall be considered halved.

"Otherwise provided for" in rules 15, 31.

Penalty for lost ball:

In match play, loss of the hole.

In medal play, the competitor must return as near as possible to the spot from which the lost ball was struck, tee a ball and lose a stroke.

RULE 30.—If a ball be lost in fog, bent, whins, long grass, or the like, only so much thereof shall be touched as will enable the player to find his ball. The penalty for a breach of this rule shall be the loss of the hole.

Penalty:

In match play, loss of the hole.

In medal play, two strokes.

RULE 31.—If a ball be driven out of bounds, a ball shall be dropped at the spot from which the stroke was played, under penalty of loss of the distance.

Penalty:

In match play, loss of the distance.

In medal play, loss of the distance.

RULE 32.—In a three-ball match, if a player consider that an opponent's ball on the putting-green might interfere with his stroke, he may require the opponent either to lift or hole out his ball at the opponent's discretion.

If an opponent consider (1) that his own ball, if left, might be of assistance to the player, he is entitled to lift it, or hole out at his discretion; or (2) that the ball of the other opponent might be of such assistance, he may require that it be either lifted or holed out at the other opponent's discretion.

RULE 33.—A player shall not ask for advice from any one except his own caddie, his partner, or his partner's caddie, nor shall he willingly be otherwise advised in any way whatever, under penalty of the loss of the hole.

In match play, loss of the hole.

In medal play, disqualification.

Penalty:

RULE 34.—If a ball split into separate pieces, another ball may be put down where the largest portion lies, or if two pieces are apparently of equal size, it may be put where either piece lies, at the option of the player. If a ball crack or become unfit for play, the player may change it, on intimating to his opponent his intention to do so. Mud adhering to a ball shall not be considered as making it unfit for play.

RULE 35.—If a dispute arise on any point, the players have the right of determining the party or parties to whom it shall be referred, but should they not agree, either side may refer it to the rules of golf committee, whose decision shall be final. If the point in dispute be not covered by the rules of golf, the arbiters must decide it by equity.

Such decisions may be finally referred to the executive committee of the United States Golf Association.

ETIQUETTE OF GOLF.

1. A single player has no standing and must always give way to a properly constituted match.

2. No player, caddie, or onlooker should move or talk during a stroke.

3. No player should play from the tee until the party in front have played their second strokes, and are out of range, nor play up to the putting-green till the party in front have holed out and moved away.

4. The player who has the honor should be allowed to play before his opponent tees his ball.
 5. Players who have holed out should not try their puts over again when other players are following them.
 6. Players looking for a lost ball must allow other matches coming up to pass them.
 7. On request being made, a three-ball match must allow a single, threesome or foursome to pass. Any match playing a whole round may claim the right to pass a match playing a shorter round.
 8. If a match fail to keep its place on the green, and lose in distance more than one clear hole on those in front, it may be passed, on request being made.
 9. Turf cut or displaced by a stroke should be at once replaced.
 10. A player should carefully fill up all holes made by himself in a bunker.
 11. It is the duty of an umpire or referee to take cognizance of any breach of rule that he may observe, whether he be appealed to on the point or not.
- The "etiquette of golf" shall be as binding upon players as the other rules of the game.

HANDBALL.

DESCRIPTION AND EXPLANATION.

A REGULATION court should be about sixty feet long, twenty-four and one-half feet wide, and thirty-five feet high in the front, tapering down to thirty-three feet at the back wall.

A brick wall about twelve inches in thickness and faced with marble makes the best front wall. Cement side walls are to be desired. The floor should be white pine boards, laid on beams ten inches apart. The back wall to be twelve feet high and of wood, back of which should be a gallery of about two hundred seating capacity.

An ace is when a server sends the ball to any part of the outer court beyond the ace line, and it is not returned to the front wall by an opponent. All balls must be recovered on the first bound after reaching the floor. That is, a ball can take the circuit of the four walls before it can be termed returnable. The service is considered to be very difficult when the ball, after hitting the front wall, takes in either of the side walls on a fly, bounds on the floor, and then comes off the back wall, or after hitting one side wall bounds from the floor to the back wall, and thence to the other side wall. The great trouble in recovering these balls is that the force of their flight is expended when they come in contact with the last wall, and, therefore, drop dead to the floor. If the ball is returned to the front wall the server must recover it, either on the fly or first bound; if he fails the hand is out, and his opponent becomes server. It is allowable to serve at either side of the court, but always within the two parallel lines. Stepping beyond the inner line twice in succession, or hitting either side wall, roof or floor before striking the front wall, or serving three short balls in succession, shall cause the loss of a hand.

A low sharp service that can be placed at a side angle of the court without any rise to the ball, or sent to the extreme outside corners, is particularly destructive. Then there are the "Scotch twist," a high service that sends the ball around the court in an irritating

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fashion, and a towering ball, that does not commence to drop until reaching the corners, and then continues its fall close to the wall. There are a few players, but they can be counted upon one's fingers, who can serve the ball to the right and left without changing their position. This requires a great deal of skill and experience, but it can be done effectively, and should be seen oftener in practice.

The brilliancy of the game depends as much upon a good ball as a good pair of hands. An improperly made ball is discouraging to an expert; in fact, no one who has any regard for the safety of his hands, should indulge in the game without first testing the quality of the little sphere.

In a four-handed match, parties winning the toss are allowed only one hand at the commencement. The server's partner shall stand inside of the ace line, with his back to either the right or left wall, until the service ball strikes the front wall. All balls striking an opponent shall be a hinder.

The server's partner and one of the opponents generally stand side by side against the left-hand wall, if the service is from the right. The recoverer is on the alert in the outer court, the same as in a single-handed game. It is not compulsory, however, that the opponent of the server's partner shall stand just outside of the ace line. He can go in the outer court and help his partner to recover service, but he may be more useful at the line, particularly to take all line service to the left on the fly. This is a very important position against a heavy server, because in a majority of instances it results in the disposing of the hand.

A hinder is when a ball strikes your opponent and retards it from reaching the front wall. For instance, if the recoverer of service should strike either of his opponents with the ball on the way to its destination, it is termed a hinder. If said recoverer, however, strikes his partner instead of an opponent, it is an ace against him. Then, again, if the server should be hit by his partner's ball, it is a hand out. A great many of these hindrances are accidents, pure and simple, but in some instances they can be avoided, and if, in the opinion of the referee, the hinder was intentional, an ace can be counted against the side committing it, or a hand be declared out, just as the case may be. A server at work frequently hits his partner while standing within the ace line; this is also called a hinder. If a ball from a server strikes either of his opponents, before or after bounding, it becomes non-playable and is counted an ace.

When a ball from the server drops anywhere inside of the ace line, the player has the privilege of using his hand or foot; if the hand is used, it counts the same as if it was served regularly over the line; if the foot, the striker or his partner has the privilege of stopping the ball before it reaches the front wall. If the ball after being struck with the foot gets to the front wall, the striker or his partner shall have to return it before stopping it.

The use of the foot is not very frequent, and is not considered to be at all scientific. There is considerable talk of barring the play altogether. It is claimed that it would be difficult as well as dangerous to cultivate the style, and what effectiveness could be reached would be more than offset by injuries to players.

REVISED HANDBALL RULES OF THE AMATEUR ATHLETIC UNION OF AMERICA.

(FOR THE GOVERNMENT OF THE NATIONAL CHAMPIONSHIP IN SINGLES.)

Each game shall consist of twenty-one aces. The number of games to decide a set shall be determined by the Committee.

Before proceeding the players must toss for position.

The ball to be used shall be a full regulation Spalding ball, and must measure one and seven-eighth inches in diameter and weigh one and five-eighth ounces. An ace is made when the server sends the ball to any part of the court beyond the ace line, and is not returned to the front wall by an opponent.

All balls must be recovered on the first bound after reaching the floor. That is, a ball can take the circuit of the four walls before it can be termed returnable. The service is considered to be very difficult when the ball, after hitting the front wall, takes in either the side walls on a fly, bounds on the floor and then comes off the back wall; or after hitting one side wall bounds from the floor to the back wall, and thence to the other side wall. The great trouble in recovering these balls is that the force of their flight is expended when they come in contact with the last wall, and, therefore, drop dead to the floor. If the ball is returned to the front wall the server must recover it, either on the fly or first bound; if he fails the hand is out and his opponent becomes a server. It is allowable to serve at either side of the court, but always within the two parallel lines. Stepping beyond the inner line twice in succession, or hitting either side wall, roof or floor before striking the front wall, or serving three short balls in succession, shall cause the loss of a hand.

While playing the game each player must give way to an opponent, and shall in no way interfere with the playing of the ball. Should the ball strike the server before reaching the opponent, or strike the opponent while in the act of being served, this shall be termed a hinder. Many of these might be deemed accidents, while again others might be intentional, and if so decided by the referee shall count as an ace against the player violating the rule, or a hand may be counted out.

When a ball from the server drops anywhere inside of the ace line, the player has the privilege of playing it should he so desire, but in doing so the play counts the same as though the ball had been served regularly over the ace line, and if it reaches the front wall the ball must be returned by the opponent. In the return of all balls the use of the foot is debarred, and a player using the foot at any time will have committed a foul and the punishment will be the loss of an ace or a hand out.

Only one hand shall be used at a time in striking a ball, otherwise a foul is committed, and the punishment will be the loss of an ace or a hand out.

After a server shall have been retired he shall be given sufficient time to have gotten into position before play is resumed.

If an appeal is made to the referee he must decide the point promptly. His decision on all questions shall be final.

In presiding over the game, the officials shall be a referee and a scorer. The referee shall decide all questions pertaining to the serving of the ball and its return, and whether the ball be played short or fails to reach the front wall. He shall decide the aces made and shall be judge of the hand out.

The scorer shall keep a correct tally of the aces made, and shall keep the contestants informed as to the progress of the game. He shall also be a judge of the hinders or fouls. Any disobedience to the orders of the referee or scorer by a player will result in his being disqualified from further competition.

It is essential that a player conduct himself in a gentlemanly manner at all times.

Before appearing in the court a player must be properly clothed, and it is imperative that he make as neat an appearance as possible. Playing in bare feet will be debarred. The use of gloves on the hands will be allowed.

HOCKEY.

BY

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HOCKEY—What is it? Like the schoolboy when he does not understand the meaning of a word, let us turn to our dictionary. Here we find—"Hockey, a noun (English *hook; ey*), is a game of ball played with a stick or club having a hooked or curved end. It is played by a number of persons arranged in two sides or parties, and the object of each side is to drive the ball through their adversaries' goal."

How slow and cumbersome the above game seems in comparison with the ice hockey played in the United States and Canada, where speed and activity are the very keynote of the game.

Each season of the year has its sport or sports, but hockey is king of them all in the winter, as lacrosse and baseball are in the spring and summer, and football in the fall. There is scarcely a village, town, or city in Canada that cannot boast of its team or teams, and although the present game has been in existence barely a quarter of a century the interest grows every year. In the early eighties the present game began to take definite shape in Ottawa, Montreal, and Quebec. Prior to this time it had been called shinny and about the only rule known to the old game was "shinny on your own side." It was played in the open air on ponds, rivers, or lakes with almost an unlimited number of players on skates. The skates were rather crude affairs and the sticks were almost every imaginable shape and size, while what is now called the puck was some small, substantial piece of wood or other substance. The object was to score a goal as in the present game, but it was every player for himself and the number of players was only limited by the supply. Then came the closed rink, the neat-shaped modern hockey stick and its crooked blade and the rubber puck. These changes came rapidly and the game of hockey as played now is the fastest, most exciting sport in the great world's arena.

From Canada the sport has spread to the United States, England, and France. Where the open and mild winters do not provide natural ice rinks during the hockey season, large artificial ice plants have been installed. The popularity of the game is becoming greater every year and the best teams in Canada will now find worthy opponents in the United States.

As a game for the younger generation hockey is in a class by itself. It is not an old man's game. Youth, speed, endurance, coolness, courage, keenness of the eye, and quick judgment are necessary factors in the making of a successful player. Ordinary skating is by itself an admirable exercise and a splendid muscle developer.

Backwards, forwards, and sideways, as occasion demands, the skilful skater brings into play the muscles of the legs, back, neck, sides, and stomach, and all the time the lungs are being expanded. In addition to the skating the many movements required in handling the stick, dodging, checking, starting quick, and stopping, bring nearly every muscle of the body into action. Players are by the very speed of the game taught to think and act quickly.

Combination work is the secret of a team's success. Individual rushes, while pretty, are far from being as effective as the concerted rushes of a line of forwards supported by the defence. Back and forth, up and down, and across the rink, there is never an idle moment in a hockey game.

The average size of the ice space in a rink is about 200 feet long by 90 feet wide. Goals are placed about six feet from each end midway from the sides. There are seven players on each side with the following positions: Goal keeper, point, cover point, rover, centre, right wing, and left wing. With the exception of the rule relating to "off-side" there will be little trouble for a beginner in picking up the game. This rule is the principal one and it is necessary to pay particular attention to it during practice and in a game. If a player is off-side (that is between the puck and his opponent's goal) he is not allowed to play the puck until it has been touched by an opponent or until one of his own players who was on-side has skated up with the puck ahead of him.

Constant practice will be found absolutely necessary to make an expert player or a successful team.

Hockey is not entirely confined to the sterner sex, as there are many girls' and ladies' clubs. They enjoy the game, and it provides them with an excellent sport in which many of them become quite proficient.

Field Hockey.

This game, from which the sport of ice hockey or shinny originally sprung, is exceedingly popular in England. It is played on the hard ground in winter without skates. The object is the same as in ice hockey, to drive the ball through a goal with a crooked stick. It has many followers in England and has been strongly recommended as a game suitable for ladies.

LAWS OF ICE HOCKEY.

SECTION 1. A team shall be composed of seven players who shall be bona fide members of the clubs they represent. No player shall be allowed to play on more than one team in the same series during the season.

SEC. 2. The game shall be commenced and renewed by a face in the centre of the rink. Rink must be at least 112 feet by 58 feet. Nets shall be six feet wide and four feet high.

Definition of a face:

The puck shall be faced by being placed between the sticks of two opponents and the referee then calling "play."

The goals shall be placed at least ten feet from the edge of the ice.

SEC. 3. Two twenty-minute halves, with an intermission of ten minutes be-

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tween, will be the time allowed for matches; but no stops of more than five minutes shall be allowed. A match will be decided by the team winning the greatest number of games during that time. In case of a tie after playing the specified two twenty-minute halves, play will continue until one side secures a game, unless otherwise agreed upon between the captains before a match. Goals shall be changed after each half.

Sec. 4. No change of players shall be made after a match has commenced except for reasons of accidents or injuries during the game.

Sec. 5. Should any player be injured during the first half of the match and compelled to leave the ice, his side shall be allowed to put on a spare man from the reserve to equalize the teams; should any player be injured during the second half of the match, the captain of the opposing team shall have the option of dropping a player to equalize the teams or allow his opponents to put on a man from the reserve. In the event of any dispute between the captains as to the injured player's fitness to continue the game, the matter shall at once be decided by the referee.

Sec. 6. Should the game be temporarily stopped by the infringement of any of the rules, the captain of the opposing team may claim that the puck be taken back and a "face" take place where it last was played from before such infringement occurred.

Sec. 7. When a player hits the puck, any one of the same side who at such moment of hitting is nearer the opponent's goal line is out of play, and may not touch the puck himself or in any way whatever prevent any other player from doing so, until the puck has been played. A player should always be on his own side of the puck.

Sec. 8. The puck may be stopped, but not carried or knocked on, by any part of the body, nor shall any player close his hand on, or carry the puck to the ice in his hand. No player shall raise the stick above his shoulder, except in lifting the puck. Charging from behind, tripping, collaring, kicking, or shinning shall not be allowed, and for any infringement of these rules, the referee may rule the offending player off the ice for that match or for such portion of actual playing time as he may see fit.

Sec. 9. When the puck goes off the ice or a foul occurs behind the goals, it shall be taken by the referee to five yards at right angles from the goal line and there faced. When the puck goes off the ice at the sides, it shall be taken by the referee to five yards at right angles from the boundary line and there faced.

Sec. 10. The goal keeper must not during the play, lie, kneel, or sit upon the ice, but must maintain a standing position.

Sec. 11. A goal shall be scored when the puck shall have passed between the goal posts from in front.

Sec. 12. Hockey sticks shall not be more than three inches wide at any part.

Sec. 13. The puck must be made of rubber, one inch thick all through and three inches in diameter.

Sec. 14. The captains of the contesting teams shall agree upon a referee, two umpires (one to be stationed behind each goal, which positions shall not be changed during the match), and two timekeepers. In the event of the captains failing to agree on umpires and timekeepers, the referee shall appoint same.

Sec. 15. All disputes during the match shall be decided by the referee, and he shall have full control of all players and officials from commencement to finish of matches, inclusive of stops, and his decision shall be final.

Sec. 16. All questions as to games shall be settled by the umpires, and their decision shall be final.

Sec. 17. In the event of any dispute as to the decision of an umpire or timekeeper, the referee shall have the power to remove or replace him.

Sec. 18. Any player guilty of using profane or abusive language to any official or other players shall be liable to be ruled off by the referee as per Section 8.

Sec. 19. A goal net shall be used.

FIELD HOCKEY.

THE GAME AND POSITIONS OF THE PLAYERS.

The game is played by twenty-two players, eleven on each side, but where there is difficulty in getting the full numbers the respective captains may decide to play with 20 or 18. A regulation match game should be played with the full number on each side. Each eleven consists of five forwards, three halfbacks, two fullbacks, and a goal keeper. This is the general line up, but the captain may vary it if he wishes—perhaps having three fullbacks instead of two and a goal. On a cold day, in practice, this is a good plan, as it keeps all three men busy and exercising; each one taking turns in quickly dropping back into goal when the ball reaches their line. In matches, however, the goal keeper, being the most important man of the defenders, should have nothing but his own work to think of and no attempt for the three backs to act as "flying goal" is advisable.

The five forwards stand close to the centre line. Their feet and sticks must be inside the line, that is, nearer their own goal than the ball which is placed on the line.

The centre forward (C. F.) stands in the middle of the ground. On the right, about ten yards distant, stands the inside right (R. I.), between the five-yard line and the side line stands the right wing (R. W.). On the left of the centre forward stand the inside left (L. I.) and left wing (L. W.).

About fifteen yards behind the forward stand the halfbacks. Centre half (C. H.) directly in a line with the centre forward. Right half (R. H.) covering the two right forwards. Left half (L. H.) covering the two left forwards. Behind them on the 25-yard line stand the fullbacks, right and left.

The goal keeper stands between the goal posts about a foot in front of the goal line.

The game starts with the ball being "bullied off" in the centre of the ground by the two centre forwards. The ball is placed on the line and the two forwards who are bullying stand with one foot on either side of the line facing each other and standing square to the side line.

The centre halves and left and right inside forwards, on the blowing of the whistle for the bully, close up to watch it, each one ready to take the ball should it come his way.

Whichever one of the centre forwards gets the ball will try to pass it out to either of his own inside men, who, on getting possession of it, will "dribble" it up the field until met by an enemy, when he will, by a quick stroke, pass it out to the wing man. In this way, keeping a straight line and followed by their halfbacks, by skilful and clever passes and dribbling the forwards get the ball into the "striking circle." When once the ball is inside this circle a goal can be scored. All five forwards then concentrate their energies on "shooting a goal," the goal keeper and fullbacks endeavoring to send the ball well out of the circle to their own halfbacks who are waiting to pass it down to their own forwards.

RULES OF THE AMERICAN FIELD HOCKEY ASSOCIATION.

RULE 1.—A hockey team shall number eleven players, unless otherwise agreed by the respective captains.

RULE 2.—The ground shall be 100 yards long and not more than 60 nor less than 60 yards wide, marked with white lines, and with a flag at each corner. The longer sides to be called the "side lines" and the shorter sides the "goal lines."

RULE 3.—The goals shall be in the centre of each goal line, and shall consist of two uprights 12 feet apart, with a horizontal bar 7 feet from the ground.

RULE 4.—In front of each goal shall be drawn a line 12 feet long, parallel to the goal line, and 15 yards from it. The ends of this line shall be curved round to the goal lines by quarter circles, of which the goal posts form the centres. This line to be called the "striking circle."

RULE 5.—The ball shall be an ordinary cricket ball, painted white.

RULE 6.—The sticks shall have no metal fittings whatever, and no sharp edges, and they must be able to pass through a ring 2 inches in diameter and shall not weigh more than 28 ounces.

RULE 7.—No player is to have any metal spikes or projecting nails in boots or shoes, or wear hard-brimmed hats or hat pins. The skirt shall be six inches from the ground all the way round.

RULE 8.—The choice of goals shall be tossed for at the beginning of the game, and the teams shall change ends at half-time.

RULE 9.—The game shall be started by one player of each side bullying the ball in the centre of the ground, and after each goal and after half-time there shall be a bully in the centre of the ground. The bully shall be played as follows: Each player is to strike the ground on his own side of the ball, and his opponent's stick over the ball three times alternately; after which either of the two players only shall be at liberty to strike the ball.

RULE 10.—In all cases of a bully, and penalty bully, the two players who are bullying shall stand squarely facing the side lines. Every other player shall be nearer to his own goal line than the ball is, except in case of a "penalty bully."

RULE 11.—A goal is scored when the ball has passed entirely over the line between the goal posts under the bar, the ball having whilst within the striking circle been hit by or glanced off the stick of a player on the attacking side.

RULE 12.—When a player hits the ball, any other player of the same side who is nearer his opponent's goal line at the moment when the ball is hit is "off-side" unless there be at least three of his opponents nearer their own goal line, and he may not touch the ball himself, nor approach, nor remain within five yards of it, nor in any way interfere with any other player until the ball has been touched or hit by one of the other side.

RULE 13.—The ball may be caught (but it must be at once dropped on the ground) or stopped with any part of the body; but it must not be picked up, carried, kicked, thrown, or knocked back or forth, except with the stick. There shall be no play, either in hitting or stopping the ball with the back of the stick.

No charging, kicking, collaring, shinning, or tripping shall be allowed. Hooking sticks is allowable only when one of the players is within striking distance of the ball, but no striking at sticks shall be allowed. A player may hook the stick, but not the person of his opponent. A player shall not run in be-

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tween his opponent and the ball so as to obstruct him, nor cross him from the left so as to foul him, nor in any way interpose his person so as to obstruct him. In the event of a player crossing from the left and touching the ball before touching his opponent, it shall not be considered a foul.

The goal keeper shall be allowed to kick the ball (except in the case of a penalty bully) so long as it is within the striking circle. No left-handed play shall be allowed. A ball touching an umpire is not dead and does not stop the game.

RULE 14.—When a player strikes at the ball, his stick must not during any portion of the stroke rise above his shoulder. The umpire shall rigidly enforce this rule without waiting for an appeal. No player may interfere in any way with the game unless his stick be in his hand.

RULE 15.—On the occasion of a free hit, no other player than the striker shall be within 5 yards of the spot where such hit is made, and the striker must not touch the ball again until it has touched or been hit by another player. If the striker hit at but miss the ball, the stroke shall be taken again.

RULE 16.—The penalty for any breach of Rules 12, 13, 14, and 15, committed outside of the striking circles, shall be a "free hit" by one of the opposite side on the spot where the breach occurred. For any breach of Rules 12, 13, 14, and 15 by the attacking side, committed inside the striking circle, a "free hit" may be claimed by the defending side. For any breach of Rules 12, 14, and 15 by the defending side inside the striking circle, the attacking side can only claim a bully. No claim for any breach of rules by the defaulting side to be allowed.

RULE 17.—For any breach of Rules 13 and 14, except so far as Rule 14 applies to "sticks," committed by the defending side inside the striking circle the attacking side may claim a "penalty bully" (from which a goal may be scored direct) to be between the offender and one player selected by the other side, and to take place at the spot where the breach occurs. At the time of the "penalty bully" both the defending and attacking sides to be outside the striking circle, and the ball shall not be in play for either side until driven outside the striking circle, when all players shall be "on side." A "penalty bully" is awarded at the discretion of the umpire in whose half the breach occurred.

RULE 18.—For any breach of Rule 17 by the defending side, the attacking side shall be awarded a penalty goal, and for any breach by the attacking side the defenders shall be allowed a free hit.

RULE 19.—When the ball passes over the "side line," it shall be rolled in along the ground from where it crossed the line by one of the opposite side to that of the player who last touched it, in any direction except forward. No other player shall stand within 5 yards of the side line. The ball may be rolled in at once, but should the umpire be of the opinion that a player of the opposite side is standing within the 5-yard line to gain time, he shall not call the ball back. The player who rolls it in must stand with both feet behind the side line, and must not touch the ball again until it has touched or been hit by another player.

RULE 20.—When a breach of Rules 9, 10, or 19 occurs, the umpire shall sound the whistle without waiting for an appeal to be made, and direct that the bully or roll in from touch take place again, except as especially provided for in Rule 19. But if the breach of Rule 19 be by the player who rolls the ball the roll in shall then be taken by one of the other side.

RULE 21.—If the ball is hit behind the goal line by the attacking side, it shall be brought out 25 yards in a direction at right angles to the goal line from the point where it crossed the line and there bullied. But if the ball glance off or is unintentionally, in the umpire's opinion, hit behind by any player of the defending side, a player of the attacking side shall have a free hit from the side or goal line within three feet of the nearest corner flag. Such a hit to be called "A Corner." At the time of the corner all the defending side must be behind their goal line, and all the attacking side must be outside the striking circle. No goal can be scored from such a hit until the ball has been stopped dead by one of the attacking side or previously touched the person or the stick of the defending side. If, however, the ball is wilfully, in the umpire's opinion, hit behind the goal line by one of the defending side, the attacking side shall take a free hit from the point on the goal line where the ball crossed and all players must be respectively behind the goal line and striking circle, but no player shall stand within 5 yards of the striker. No free hit to be taken at a less distance than 5 yards from the goal. The ball from such a hit must be stopped dead or touched by one of the defending side before a goal can be scored.

RULE 22.—Each umpire shall give decisions in his half of the field only, but taking the whole of one side line. The field to be divided by a line, at right angles to the side lines, through the centre of the ground. The two umpires shall not cross over at half time. Should there be no umpire or umpires appointed by the two captains, the captains shall be arbitrators in all disputes.

RULE 23.—For rough play the umpire shall have discretionary power to warn the offending player, and if the offence be repeated to suspend him from further participation in the game.

RULE 24.—When a player is temporarily incapacitated the umpire shall suspend the game immediately. When the game is resumed the ball shall be bullied off on the spot where, in the opinion of the umpire, the ball was when the player was hurt.

RULE 25.—The game shall be played for one hour and ten minutes, half time

being called after thirty-five minutes. No match is won unless played full time or shall be recorded as a match.

College and school matches may be played in thirty-minute halves, but if so must be recorded as "Sixty-minute matches."

HORSEMANSHIP; RIDING AND DRIVING.

"Do you know how to drive?"

"Sure I do. Wasn't it I that upset your honor in a ditch two years ago?"

HORSEBACK RIDING.

Mounting.

The rider, even at the earliest age, should at first examine the girths and the bridle, and see if they are properly adjusted. The rider stands at the shoulder of the pony with his left side toward that part. He then lays hold of the reins with his left hand, drawing them up so short as to feel the mouth, and at the same time twisting a lock of the mane in his fingers so as to steady the hand. Next the left foot is placed in the stirrup. At this moment a spring is given from the right foot, the right hand reaches the cantel of the saddle, and the body is raised till the right leg is brought up to the level of the left, when the slightest imaginable pause is made, and then the right leg is thrown over the back of the pony, while the right hand leaves its hold, and the body falls into its position in the centre of the saddle; after which, the right foot has only to be placed in the stirrup to complete the act of mounting.

Dismounting

Is exactly the reverse of the last process, and requires, first, the reins to be shortened and held in the left hand with a lock of the mane; secondly, the right leg is taken out of the stirrup, and is thrown over the back of the horse until it is brought down to the level of the other leg. After this, if the pony is of a small size, suitable to that of the rider, the body is gently lowered to the ground, and the left leg is liberated from the stirrup; but if the horse is too high for this, the foot is taken out of the stirrup by raising the body by means of the hands on the pommel and cantel of the saddle, and then the body is lowered to the ground by their assistance.

The Management of the Reins

Is of great importance to the comfort of the rider, and also to his appearance, for unless they are held properly, the body is sure to be awkwardly balanced. When the single rein is used, the best position is to place the middle, ring, and little fingers between the two reins, and then to turn both over the forefinger where they are tightly held by the thumb. In all cases the thumb ought to point towards the horse's ears, by which the elbow is sure to be kept in its place close to the side, and a good command of the reins is insured. If a double-reined bridle is employed, the middle finger separates the two snaffle reins, and the little one those attached to the curb, all being turned over the forefinger, and firmly held by the thumb. In both cases the ends of the reins are turned over the left, or near side of the pony's shoulder. When it is intended to turn the horse to the left, it is only necessary to raise the thumb toward the chest of the rider; and, on the contrary, when the desire is to turn him to the right, the little finger is turned downward and backward toward the fork. In many well-broken ponies the mere moving of the whole hand to the right or left is sufficient, which, by pressing the reins against the neck, indicates the wish of the rider, and is promptly responded to by the handy pony.

The Seat

Should always be square to the front, without either shoulder being in advance; the loins moderately arched inward, without stiffness; the elbows close to the side, but held easily; the knees placed upon the padded part of the flap *in front* of the stirrup leathers; toes turned *very* slightly outward, and the foot resting on the stirrup, the inside of which should be opposite the ball of the great toe, and the outside corresponding with the little toe. The heel should be well lowered, as far as possible beneath the level of the toe, which gives a firm seat. But the great point is to obtain a good grasp of the saddle by the knees, which should be always ready to lay hold like a vise, without constantly tiring the muscles. The left hand is now to be held very slightly above the pommel of the saddle, and the right easily by the side of it, with the whip held in a slanting position.

The Control of the Horse

Is effected by the reins, heels, voice, and whip, variously used according to his disposition and temper. Some require only the most gentle usage, which, in fact, is almost always the most efficacious, especially by young people, for whom

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the horse and dog seem to have an especial affection, and to be always more ready to obey them than might be expected, when their want of strength to enforce their wishes is considered. The young rider will therefore generally find it to his own interest, as well as that of the noble animal he bestrides, to use his whip and heel as little as possible, and to effect his object solely by his voice and the gentle pressure of the bit. In this way the most high-couraged horses are kept in order by young lads in the racing stables, and the amateur will do well to follow their example. It is astonishing how fond horses and dogs are of being talked to by their juvenile riders, and it is right to gratify their love of society by so doing on all occasions. The reins serve, as already explained, to turn to the right or left, or by drawing tight to stop the horse, and, on the contrary, by relaxing them to cause him to proceed, aided if necessary by the voice, heel, or whip. When it is desired that the right leg should lead in the canter or gallop, the left rein is pulled, and the left leg pressed against the flank, by which means the body of the pony is made to present the right side obliquely forward, and by consequence the right leg leads off. On the other hand, if it is wished to lead with the left leg, or to change from the right, the right rein is pulled, the right leg pressed to the side, and then the left shoulder looks forward and the left leg leads off.

DRIVING.

Putting To.

Before driving, it is necessary that the horse or pony should be "put to," which is effected as follows: First, slip the shafts through the tugs, or, if there are hooks, drop them down into them, second, put the traces onto the drawing-bar, either hooking them on, or else slipping them on to the eyes, and being careful to place the leather stops in these to prevent the trace coming off; third, buckle the belly-band sufficiently tight; and fourth, buckle the kicking-strap, or breeching, if either is used. After this, the reins are taken from the terets, where they were previously placed, and the horse is ready.

Directions for Driving.

In driving, the reins are held sufficiently from the mode described as used in riding, the forefinger being first placed between them, and then both the reins are grasped by all the other fingers, and the near side rein is also held firmly against the forefinger by means of the thumb. In this way, on an emergency, the near or left rein may be pulled by itself, by holding it firmly with the thumb, and suffering the other, or off rein, to slip through the fingers, or *vice versa*.

Whilst turning, or when driving a high-couraged horse, and in critical situations generally, the right hand must be at all times called to the assistance of the left; thus, the reins being grasped as before stated, you pass the second and third fingers between them, and loosening your hold on the off rein a little, let the right hand have complete command of its guidance, still, however, firmly holding both reins in your left; this position gives you great power over your horse.

Starting.

Holding your reins with both hands, start your horse either by your voice or by the reins, gently feeling his mouth, but neither pulling at it nor jerking the reins. Many high-couraged horses have been made balkers by the stupidity of a driver. If a young horse's mouth is hurt by the driver checking him every time he starts, he will be sure to incur some vice; the habit of rearing, or of balking, will most probably be the result. The learner may say, "Supposing, however, he refuses to start, what then is to be done?" We reply, have patience; let the groom lead him off, caress him, speak quietly, and encourage him to proceed, and if he presses on one side, as if he wanted to go round, turn him round, if there be room, and as soon as he has his head the right way, give him his liberty, and by the voice or whip urge him to proceed. Much must here be left to the judgment; a touch with the whip in such circumstances would make some horses jib, while it would immediately start others; some it would be advisable to urge only with the voice, and to have a person to push the buggy on, so that the collar should scarcely touch the shoulder in starting. Supposing there is not room for the horse to turn, and he persist in his attempt to do so, we have always found it best in such a case to desire the groom to let his head alone, and to go to the side toward which the horse is inclined to turn, and then push against the extreme end of the shaft; if he does this, speaking quietly to him all the time, forty-nine horses out of fifty, that are not irreclaimable balkers, will after a short struggle proceed. The sooner you get rid of a confirmed jibber the better; no quality he can possess would repay you for the trouble the vice occasions; which is besides always a dangerous one.

The Road.

Having started your horse, keep your eyes open, looking well before you, not merely for the purpose of avoiding other carriages, but looking up the road, and on each side of it, so as to notice if there be any impediment to your horse's progress; any loose stones which he might tread upon, and thereby be thrown down; any sudden risings or fallings in the road, or any object which might frighten him. Always keep your horse well in hand, that is, feel his

mouth; if you do not you are never prepared for emergencies; if he stumbles, you cannot help him to recover his legs; if he starts, you cannot check him. But in keeping him in hand, as it is called, you may still fall into error, for if the horse be very light in the mouth there is a probability that an inexperienced person may so check him, as not only to impede his progress, but to put him out of temper; and as nothing is more difficult for a novice to manage than a very light-mouthed horse, when he once takes it in his head to have his own way, you must be careful merely to feel his mouth so as to have the reins at command, but still not sufficiently tight to check him. This is called driving with a light hand, and indeed is the perfection of driving, when it has become so habitual as to have assumed the character of "a style." Young drivers, in attempting this, will frequently allow their horse to run from one side of the road to the other; or, if their peregrinations do not embrace the whole of the road, they allow their horse (in fact make him) to sidle about in such a manner, that if they were to look at the track of their wheels, they would be astonished at what they had been doing. This must be avoided; as nothing is so ungraceful as to see a carriage yawing from side to side. A little thought will, moreover, convince you how much unnecessary ground you have gone over by this practice. Holding in hand sometimes produces another bad practice, particularly if your horse's mouth is not delicate; it gets him into the habit of hanging in your arms, and boring continually upon the bit, until his mouth becomes so callous, that if he stumbles he must come down, unless you can hold him up by main strength—a feat only to be achieved by a young Hercules. This may be avoided sometimes by keeping the bit moving in his mouth, but more frequently by not unnecessarily pulling at the rein; many a horse has become an arrant bore from this practice. If the reins are held with both hands, as before directed, you will have much more command of them, and a little attention will prevent these inconveniences.

DIFFICULT SITUATIONS FOR YOUNG DRIVERS.

Tusking the Bit, and Running Away.—Some ill-tempered horses will become violent upon being in any manner put out of their way—such, for instance, as being suddenly stopped two or three times within a short distance, or receiving a sudden cut with the whip; but instead of exhibiting this violence by rearing or kicking, they will seize the bit in their mouths, close against the tusk, and run violently to one side of the road, as if with the intention of landing you in a ditch, or giving you a resting-place in a shop window. Your best mode is to stop them at once by a quiet pull, speaking softly, as if nothing were the matter; and then coax them into good-temper until you get home, when we will presently explain to you how to prevent the like again. If this cannot be done, give them the head for a moment (a short one it must be), and after bestowing a violent switch across the ears, snatch the reins suddenly toward the side to which the horse is boring, which will probably, from the surprise, disengage the bit, and enable you almost simultaneously either to pull him up, or draw him away from the danger. You will observe we have said on the side *to which he is pressing*, for it would be all but impossible to draw him to the other; for such a brute always seizes the bit by the branch or side which is next to the place he is running to, knowing, or rather thinking, you will pull the other rein, in which case the side of the face would aid him in resisting your efforts. The remedy for this is a ring bit, for it has no branches for the horse to get hold of, and if he merely seizes that part of the bit which is in his mouth, a sudden jerk will instantly disengage it, that is, if it be done with sufficient decision; but our experience teaches us, that in ninety-nine cases out of a hundred the horse will not attempt this; he misses the branches, and is disappointed and abashed at not being able to play the old trick.

Frequently, however, a horse tusks the bit, as it is called, with the view of bolting; if you cannot disengage the bit in the way directed, you have only to stop him as quickly as you can. Recollect, however, that a continual dead pull will never stop a runaway horse, unless indeed you have the strength of Hercules: his mouth soon becomes callous to the action of the sharpest bit. Nor is it proper to keep jerking a horse under such circumstances, as that would rather urge him to increase his speed. The ordinary mode is to take the reins short in your hands, and then, by a sudden, steady movement of the body backward, exerting at the same time all the strength of the arms, endeavor to pull him up; this, repeated two or three times, will generally be effectual. Suppose it not to succeed, adopt the following plan, by which we have stopped many a determined bolter who had bid defiance to more than one reputed whip. Cross the reins in your hands, that is, place the right rein in the left hand, the left in the right hand, take them very short, and then suddenly put all your strength to them with a sudden jerk, but continue the pressure, violently sawing them at the same time; if this will not bring the horse to his haunches at the first attempt, let him partially have his head—that is, sufficiently slacken your pull to give his mouth time to recover its feeling—and then repeat the effort. We never knew a horse that we could not stop by this method, which, though not very graceful, is very effective.

Stumbling and Slipping.—If your horse be kept well in hand, you will generally be able to keep him from absolutely coming down. You will naturally put more force to your pull upon his making the stumble, and this jerk, if suc-

ceeded by a strong, continuous aid, generally keeps him on his legs; a smart stroke with the whip should follow, to remind him that his carelessness is not to be repeated. A horse that is apt to stumble, or even one that from his form is likely to stumble, should not only always be kept well in hand, but also be kept alive, by now and then being reminded, without actually punishing him, that his driver has a whip in his hand. A horse with his head set too forward, that is, low in the withers, is almost sure to come down sooner or later, particularly if his fore legs stand at all under him, as it is technically termed, that is, slanting a little inward. Stumbling, however, be it remembered, is totally distinct from slipping; the stone pavement will give the tyro plenty of opportunity to perceive the difference. If a horse slips, a sudden jerk will probably throw him down; in such a case the driver must aid the horse by a strong, steady hold, letting him, as it were, lean on the bit to help himself to stand. It requires some nerve thus to aid the horse, without being induced to jerk him by the suddenness of the slip.

Jibbing, or Balking.—Demosthenes, on being asked what was the soul of oratory, answered, "Action, action, action!" If we are asked what is the best mode to adopt with a jibber, we should say, "Patience, patience, patience!" This, however, must be qualified by the temper of the horse. Some balkers (*but very few*) may be started by sudden and severe whipping; ninety-nine times out of a hundred it will render a jibber restive, mischievous, or obstinate. Experience only can dictate the management of such animals. Some will start after waiting for a short time, having their head free; coaxing is generally the best means, and, as before said, have patience, and do not be in too great a hurry to start. Some may be started by being turned round, and others by being backed a short distance. Many think it a good plan to punish a jibber when he is once started; experience proves the contrary, for, depend upon it, he will recollect this next time, and will not fall further to exercise your patience, for fear of the flogging.

Kicking.—An experienced eye can generally tell if a horse is likely to kick, and also when he is about to kick. We, however, always drive with a kicking-strap, and would recommend the practice. When a horse attempts to kick, you must hold him well in hand, and lay the whip well into him about the ears, rating him at the same time with a loud voice; this plan we have generally found effective. We would, however, recommend the young driver first to try the rating without the whipping; the voice frequently has a wonderful effect upon a horse. Be sure, however, to keep him well in hand.

Rearing.—Little can be done in harness with a determined rearer. When he tries to rear, if you have room give him a half turn, this will make him move his hind legs, and will consequently bring him down; you will find a series of turns punish and surprise him more than anything else. When you have once got him on the move, with his head right way, you can punish him with the whip, if he is one that you are sure you can manage; if not, you had better leave well alone. With respect to rearing in double harness, we will here observe, the best way to act is to push the other horse forward, and soothe the restive one, until you have fairly got him on; you can then punish or not, according to your judgment, but not without reference to your ability to manage the horses.

Shying.—Before a horse starts at anything on the side of, or lying on the road, he usually gives some notice of his intention, by cocking his ears, and bending his head toward the object. As soon as the driver perceives these signs of uneasiness, he should be upon his guard to prevent a sudden turn round, or flying to one side, which would evidently be dangerous; and not only on this account should he be attentive, but because each time the horse violently shies, the habit is in progress of being confirmed. As soon, therefore, as a horse accustomed to shy gives notice of uneasiness, he should be coaxed up to the object of his terror, so that he may perceive its harmlessness; let him deliberately stand and view it, and if he cannot be got to it, let it, if possible, be brought to him, and then replaced in its former position; thus let him be induced to go up to it by care and kindness before it is passed, and you will generally find that a repetition of this practice will greatly improve, if it do not cure him; but by no means flog or force him up to it—let him take his time. We are now, of course, speaking of a horse whose sight is perfect. Some horses shy from having an imperfect vision; in fact, because they are going blind, and the sight is affected; and we would, therefore, advise a young driver to have his horse's eyes examined (if he is unable to examine them himself), whenever this shying is violent after a few lessons of the nature before detailed. We do not mean to say that there are not horses so timid that they cannot be broken of this bad practice; but we do say that most horses may be, if taken in time, and also that nine out of ten of these animals owe their vice to bad breaking, or bad drivers.

KITES AND KITE-FLYING; AN INTERESTING EXPERIMENT FOR BOYS.

BY

WILLIAM ABNER EDDY,

Expert in Kite-flying and Kite-photography.

KITES can be made from sticks, cloth, paper, or from material intended for other purposes. If two sticks of spruce be bound together and one placed across the other at a distance of one-fifth of the upright stick from the top of the upright stick—both sticks of equal length—the resulting kite so made will fly without a tail if the cross-stick is bent backward into the form of a flat bow. Very thin sticks can be put together in this way and tissue paper can be pasted upon them without using string for the edge of the paper. The bridle of this kite, known as the Eddy kite type, should be tied well below the top of the kite. While a kite made without edge-strings saves much trouble, it yet fails of durability because the edge is easily torn, especially when tissue paper is used. If edge strings are passed around the ends of the sticks, as in the ordinary tail kite, this should be done before bending the cross-stick backward into the form of a flat bow, because any bending of the cross-stick afterward will loosen the edge-strings. So far as adjusting the bridle is concerned, that can be done in various positions experimentally until the kite flies.

I advise against the use of a very large kite for boys—say six feet in diameter, because considerable extra expense for sufficiently strong cord will thereby be incurred.

Many interesting experiments can be easily tried by using the upward slanting kite cord as a lifting force. For example, a square piece of thin pasteboard with four thin sticks fastened to the corners and united in a bunch at the top makes a light suspended platform upon which may be placed thin pieces of tissue paper not over three or four inches in diameter. This platform can be attached to the upward slanting kite string, and paid out upward as the kite is paid out. This will raise the light platform into the air. The tissue paper is laid on the platform and held down by a light stick of wood fastened to a string a foot long. When the platform has reached a height of about 200 feet, the paper can be released by quickly jarring the string at the earth or by paying out ten feet so rapidly that the stick of wood holding down the paper drops off the platform and releases the paper, which may float away to a great height in the air in case of a rising air current. I advise hanging the platform by means of sticks at the corners of the pasteboard because string twists and distorts the platform. The platform should be suspended from one

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string. It will then escape entanglement with the kite string extending on up to the kite.

Several pieces of tissue paper can be dropped aloft at the same time. Following roughly is the back construction of the Eddy kite. It flies with its bulging side toward the wind, and tailless.

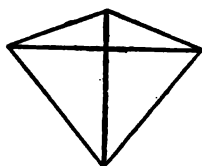
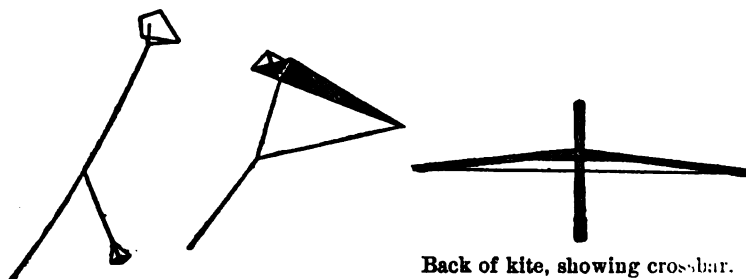


Fig. 1.

Very thin strips pasted down on tissue paper without edge strings.
Fig. 2 shows bridle,
Fig. 1 back of kite.

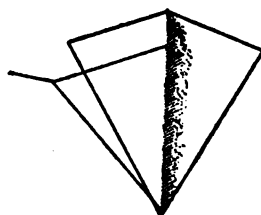
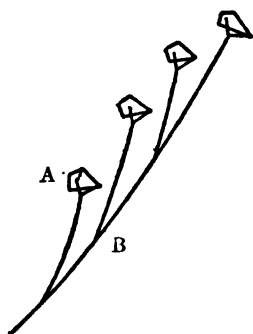


Fig. 2.

I advise boys by all means to avoid the use of wire for flying kites. String is preferable, because the wire may kink or break and trail over live electric wires and cause currents of electricity to jump the insulation. Any one taking hold of such a trailing wire, if he were standing on wet ground or iron, would be seriously shocked if his kite were sagged owing to light wind and came in contact with a live wire. It is the general belief that in such a case the electricity would jump the insulation and charge the kite wire with fatal results. But I consider dry cotton cord perfectly safe.

In flying kites tandem, each kite is flown with its individual string, but none of the branch lines must be so long that they permit the lower kite to get to the point where the lines radiate. If kite A drops upon the junction point B, a bad tangle results.



But if kite A only drops against the line below B, it only upsets and again rises into position.

LACROSSE.

BY

THOMAS WALL,

Canadian Representative for A. G. Spalding & Brothers.

LACROSSE had its origin among the aboriginal tribes of America, with what particular tribe or in what particular section, no man can tell with any degree of exactness, but it is probable that while Christopher Columbus was yet having his argument with the Spanish scientists, the game was then ancient in the New World.

But the game, which had its inception among the Indians, really reached its highest state of development in the hands of the far distant grandsons of the men who first took possession of the North American continent.

When the French first landed in America they found the Indians in the northern part of the land amusing themselves with a game played with a netted stick and a ball. The stick resembled a cross or bishop's crozier, and this led the adventurous Frenchmen to name the implement used in the pastime "La Crosse," this latter being welded in one word and applied to designate the game and the stick.

There is one story handed down of a tragic event connected with the game. A band of Indians approached a fort in the days of the old French régime and announced that a game of lacrosse would be played. The game started, and in the excitement of the contest, sentries carelessly left their posts, and the doors of the stockade were left ajar. The game had centred in a struggle close to the fort, and, at a signal, blankets were discarded, and from under the cover weapons were quickly produced and a massacre followed.

In the old days of the Indian game it was played by unlimited sides, sometimes whole villages playing against each other, and from the accounts handed down in the old records, these games appear to have sometimes resulted in bloodshed.

The history of the game is not a very clear one, but the Indian seems to have clung to his old pastime, at least in Canada, although there are some instances of the game yet remaining with some of the tribes in the United States. The Indians of Caughnawaga, near Montreal, and those of St. Regis, near Cornwall, and not far from the New York border, retained the game, and fifty years ago they were the greatest exponents of the game in Canada. Then the white men

began to take a more than passing interest in the game. They began to play it, and soon learned to be adept with the crosse, and presently were able to cope with the red man at his own pastime. Little by little interest in the game increased among the white inhabitants of Canada, and soon there were teams organized solely of white men, and these showed skill and strength at the game which they had taken up. The white man's fondness for the game developed year by year, while gradually they surpassed the descendants of the original players, and now the Indian is unable to compete with the white teams, while the Indian players, who can win places in white teams, can be counted among the thousands of Canadians who play the game.

It is rather odd to say that a white man was "father" of a game that was old when the New World was first touched by the Genoese, yet this is true enough of lacrosse. Dr. George Beers has that title, and although he has now passed to his reward, his name will long remain as the "father" of a fine game. Dr. Beers, with Mr. W. L. Maltby, a well-known figure in Montreal's business circles, undertook to set the game upon a solid basis with the Canadians, and the result of their missionary work was the formation of uniformed clubs, and afterwards the formation of the National Amateur Lacrosse Association, which for many years controlled the destinies of the game in Canada. To-day there are associations in the middle east, in Ontario, in Manitoba, and British Columbia, while there is an international league in which teams in Seattle and St. Paul are interested. The game is played in New York, in Chicago, and San Francisco, while many of the leading colleges in the United States have taken some interest in the game, with the result that there is a growth of interest in the grand game throughout the republic.

The game has taken hold in England to some extent, and there is a lacrosse league over there which has a large membership, while in Australia there is a league of considerable importance, showing that the game, if properly played, is one to command attention whenever offered to people who love fine manly sport and who want to see opportunity for individual and team play. Lacrosse affords excellent chance for the individual to shine, but the secret of success lies in combination, and teams which arrive at this quickest are certain to prove victorious.

Dr. Beers worked at his idea to get Canadians interested in the game, and in 1876 he organized a team to go to England. This proved a success, and did much to advertise Canada, and in 1883 there was a second trip. On this latter occasion a team of amateurs and a team of Indians were taken, and the matches between these organizations proved wonderfully interesting to the Britishers.

In 1884 a team of players from the United States, organized by Erastus Winans, went to England and had a successful trip. In 1885 a team of Montreal players toured the principal cities of the United States.

In 1887 a team of players from Ireland toured Canada. Later there were visits from teams from the United States to Canada, and in the course of time visits to New York by teams from Montreal and elsewhere became frequent. In 1903 the Toronto Lacrosse Club sent a team to England, and the following summer a team composed of students of Oxford and Cambridge Universities toured Canada and the States.

These international visits have done much to promote a knowledge of the game and to make known its many fine points. The movement of Canadians to the United States has aided largely in developing good material there, and in the course of time, when the youngsters begin to handle the stick at an early age, there should be no reason why first-class teams cannot be produced here.

The greatest development of the game has been in the middle of Canada, from Toronto to Montreal. The name of Shamrocks is on the tip of the tongue when lacrosse is mentioned. This club has done a great deal to improve the game, and at the hands of the green-shirted Irishmen of Montreal the sport has gained much. Montreal and Toronto Clubs were famous in the old days, while later teams of fame have been the Capitals of Ottawa, Cornwall, Nationals of Montreal, Brantford, and New Westminster.

The Canadians naturally excel. With them it is a National pastime, and the growing boys begin to fondle a stick at an early age, and it is this which makes them so graceful, so lightfooted, and so certain in all that they do when on the field of play. It is a game requiring physical strength, speed, and quick-thinking qualities, and such a combination of good points can well be achieved by participation in this magnificent sport.

UNITED STATES LACROSSE RULES.

RULE 1.—SECTION 1. The crosse may be of any length to suit the player, and shall not exceed one foot in width. It shall be woven with catgut. ("Catgut" is intended to mean raw hide, gut, or clock string; not cord or soft leather.) A string must be brought through a hole in the side of the tip of the turn, to prevent the point of the stick catching on opponent's crosse. A leading string resting upon the top of the stick may be used, but shall not be fastened so as to form a pocket lower down the stick than one of the length-strings. The length-strings shall be woven to within two inches of their termination, so that the ball cannot catch in the meshes. Metal of any kind shall not be allowed upon the crosse; splices must be made either with string or gut.

RULE 2.—The ball shall be India rubber sponge, not less than seven and three-quarters, nor more than eight inches in circumference and four and a half to five ounces in weight. In matches it shall be furnished by the home club, and shall become the property of the winning team.

RULE 3.—SECTION 1. Each goal shall consist of two poles six feet apart, and six feet high out of the ground, joined by a rigid top cross-bar. The poles must be fitted with a pyramid-shaped netting of not more than one and one-half inches mesh, which pyramid shall extend and be fastened to a stake in the ground at a point seven (7) feet back of the centre of the goal, and said netting shall be so made as to prevent the passage of the ball put through the goal from the front, and the bottom of the netting must be held close to the ground with tent pegs or staples. They shall be placed at least 110 yards, and if the ground will permit, 125 yards, from each other. In matches, they must be furnished by the home club.

SEC. 2. The Goal Crease shall be a marked line, twelve feet square, and the goal poles shall be placed six feet from the front and back lines and three feet from the side lines.

RULE 4.—SECTION 1. Twelve players shall constitute a full team; they shall

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be regular members, and in good standing, of the club they represent and of no other club.

SEC. 2. The players on each side shall be designated as follows:

"Goal Keeper," who defends the Goal; "Point," first man from Goal; "Cover Point," in front of Point; "First, Second, and Third Defence;" "Centre," who faces; "Third, Second, and First Attack," and the players nearest the opponents' goal shall be called "Outside Home" and "Inside Home."

RULE 5.—SECTION 1. Field Captains, to superintend the play, shall be appointed by each club previous to the commencement of a match. They shall be members of the club for whom they act and of no other. They may or may not be players in a match, but neither team shall have as Field Captain a non-player without consent of the other team.

SEC. 2. Field Captains who are non-players shall not carry a crosse, nor shall they be dressed in lacrosse uniform, nor shall they in any manner obstruct the play or interfere with an opponent during the match.

SEC. 3. They alone shall be the representatives of their respective teams in all disputes.

SEC. 4. They shall "toss" for choice of goals, and none other than either of the said Field Captains, or the Referee, shall be allowed to claim "foul" during a match. The Field Captains shall report infringements of the laws during the match to the Referee. They shall also define the bounds of the playing field, and report same to the Referee.

SEC. 5. If, after the commencement of a match, it becomes apparent that either Umpire is guilty of giving unjust decisions, the Field Captain of the side offended may enter a protest with the Referee against his conduct, and ask for his removal and the reversal of the Umpire's decision.

SEC. 6. The Field Captain, as well as the members of his team, shall be answerable to the authority of the Referee, and shall be liable to expulsion from the field by the Referee.

RULE 6.—SECTION 1. The Referee shall be a disinterested party, and shall not be a member of either of the contending clubs, unless agreed upon by both clubs. The authority of the Referee shall commence from the time of the appointment, and shall continue until the end of the match.

SEC. 2. The referees and umpires who are to act in the games on the official schedule shall be agreed upon at the annual convention. Alternates shall also be chosen, the expenses connected therewith to be shared equally by the two contesting teams.

SEC. 3. In case principals and alternates fail to appear, the captains of the two contesting teams shall settle upon the referee and umpires.

SEC. 4. Before the match the Referee shall see that properly qualified Umpires are selected, as provided for in Rule 7, and Time Keepers as provided for in Rule 8.

SEC. 5. When "foul" has been called by either Captain, the Referee shall immediately call "time" or blow his whistle (except as provided in the following Section), after which the ball must not be touched by either party, nor shall the players move from the position in which they happen to be at the moment, until the Referee has again started the game.

SEC. 6. He shall not have the power to suspend play when the player who has been fouled is still in possession of the ball, or the ball remains in the possession of such player's side.

SEC. 7. The jurisdiction of the Referee shall not extend beyond the match for which he is appointed. At the commencement of each game, and after "fouls" and "ball out of grounds," he shall see that the ball is properly faced. He shall have the power to call a foul on any player or Field Captain of either side.

SEC. 8. Any side rejecting his decision, by refusing to continue the match, shall be declared losers. All disputed points, or matters of appeal, that may arise during his continuance in office shall be left to his decision, which shall be final, provided his decisions have been in accord with the Rules and Constitution.

SEC. 9. If "foul" has been claimed by either Field Captain and the game scored before the Referee has had an opportunity to call "time," the Referee shall decide whether or not a foul has been committed; and if he decides that a foul has been committed, he shall give a free throw, face the ball, or allow the goal if Section 6 is applicable.

SEC. 10. In the event of a complaint being made and proven against the decisions of either Umpire, the Referee shall dismiss the Umpire and appoint another, setting aside and reversing the decision objected to.

SEC. 11. The Referee shall, in addition to his control of the players, have control and jurisdiction over the two Field Captains, and in the event of either Field Captain interfering with the players in the opposing team, or being guilty of threatening, profane, or obscene language, or in any way violating any rule that would bring a player under censure, the Referee shall be empowered to order the Field Captain to leave the field, and the refusal on the part of any Field Captain to obey such a ruling shall forfeit the match to the opposing team.

SEC. 12. In the event of Umpires not being appointed by consent of the clubs, it shall be the duty of the Referee to appoint one or more Umpires as may

be required, neither of whom shall be one of the parties objected to by either club.

SEC. 13. The home club in all matches shall be responsible for keeping the grounds clear of spectators, and in cases where the spectators persist in crowding on the grounds, or in any way interfering with the players or the officials so as to delay the progress of, or affect the result of, the match, the Referee shall declare the match off, and on his reporting the circumstances to the Advisory Committee, they shall order the match to be played over on neutral grounds on a date to be fixed by them, or the match awarded to the club not at fault.

SEC. 14. Any game scored after the Referee has blown his whistle or called time, shall not count.

SEC. 15. The Referee shall strictly enforce the whole of Rule 10.

RULE 7.—SECTION 1. There shall be two Umpires, one at each goal. They shall be disinterested parties and shall not be removed during the progress of the match, except by order of the Referee.

SEC. 2. They shall not change goals during the match, and shall stand behind the goals. In the event of the game being claimed, the Umpire at the goal shall at once decide whether or not the ball has passed through the goal, his decision simply being "game" or "no game," without comment of any kind. His decision shall be final, except as provided in Rule 6, Section 10.

RULE 8.—SECTION 1. Two Time Keepers shall be appointed, one by each Field Captain, before the commencement of the match, whose duty it shall be to keep an accurate account of the time of each game, deducting time for stoppages in the actual play resulting from injuries to players, ball out of bounds, or disputes. They shall also keep a record of all time lost between games. They shall immediately report to the Referee any variance in their time, and the matter shall be at once decided by him. The Referee shall compare the record of both Time Keepers immediately after each game. He shall be guided by them as to the duration of the match.

RULE 9.—SECTION 1. Before the match begins the Referee shall draw the players up in lines and see that the regulations respecting the ball, crosses, and shoes are complied with. Disputed points whereon the Captains disagree shall be left to his decision.

SEC. 2. The game shall be started in the centre of the field by the Referee placing the ball between and touching the reverse surfaces of the crosses of the players facing, and when both sides are ready the Referee shall call "play." This is known as "facing." The players shall have their left side towards the goal they are attacking, and in every case the crosses must be drawn. The ball shall be faced in any part of the field in this manner whenever it is necessary. In all cases where the ball is faced no player shall be allowed within 10 feet of those facing the ball until it is in play.

SEC. 3. Games in all cases must be won by putting the ball through the goal from the front side.

SEC. 4. After the end of the first half the opposing teams shall change goals.

SEC. 5. Should the ball be accidentally put through a goal by one of the players defending it, it shall be a goal for the team attacking the goal. Should it be put through a goal by any one not actually a player it shall not count.

SEC. 6. In the event of the goal post being knocked down and the ball put through what would be the goal in the opinion of the Umpire at that end, if the goal posts were standing, it shall count a game for the attacking side.

SEC. 7. In no case must the ball be faced closer to the goals than ten (10) yards in any direction.

SEC. 8. The goal keeper, while defending his goal within the goal crease, although not allowed to catch the throw with his hand, may put away with his hand or block the ball in any manner with his crosse or body.

SEC. 9. Should the ball lodge in any place inaccessible to the crosse, or become ensnared in the goal netting, it may be taken out with the hand, and the player picking it up must face for it ten feet within playing limits with his nearest opponent. In case either uses a left-handed crosse, the referee shall call "play" when both are ready and toss the ball up between them.

SEC. 10. Should the ball catch in the crosse netting, the crosse shall be immediately struck on the ground to dislodge it.

SEC. 11. Ball thrown out of bounds must be "faced" at the nearest spot where it left the bounds and all the players shall remain in their places until the ball is faced.

SEC. 12. Players may exchange their crosses during a match.

SEC. 13. If the player should be in possession of the ball when "time" is called he must drop it on the ground. If the ball enters the goal after "time" has been called it shall not count.

SEC. 14. Should a player lose his crosse during the game he shall consider himself "out of play," and shall not be allowed to kick the ball or touch it in any way until he recovers his crosse.

SEC. 15. Any player considering himself purposely injured during the play must report to the Captain, who shall report to the Referee.

SEC. 16. Should a player be injured during a match, and compelled to leave the field, the Captain of the opposing team shall have the right to refuse to permit the playing of a substitute in place of the injured player, in which case said

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Captain must drop a player from his team so as to equalize the sides; or he may permit a substitute to take the place of the injured player, who shall not return to the game. An injured player whose place is not taken by a substitute may return to the game. If said Captain offers to permit the playing of a substitute, which offer is not accepted, he need not drop a player to equalize the sides. In the event of any dispute between the Field Captains as to the injured player's fitness to continue the game, the matter shall at once be decided by the Referee.

SEC. 17. Should one team be deficient in the number of players, at the time fixed for starting a match, their opponents may, if they see fit, limit their own number, to equalize the sides, but no game shall be played with less than ten players on a side.

SEC. 18. No change of players shall be made after the match has commenced, except as herein provided, or by the consent of both captains.

SEC. 19. Should a foul be claimed and disallowed, the side against whom the foul has been claimed shall be allowed a free throw or the ball shall be faced, at the option of the Referee; should the foul be allowed the player fouled shall have a free throw, but in no case shall it be made within ten (10) yards of the goal. By a free throw it is understood that the player fouling and the one fouled shall be placed in the same positions as they occupied immediately previous to the foul, the player fouled having the ball on his crosse. At the word "play" from the Referee, each shall be allowed to play in any manner allowed by the rules of the game.

SEC. 20. A match shall consist of two thirty-five-minute halves with an intermission of ten minutes between halves, and the side scoring the greater number of goals shall be declared the winner. Time is to be taken out whenever time is called. In the event of a tie, play shall be continued after an intermission of ten minutes, for one-quarter hour, and the side having scored the greater number of goals at the end of this time shall be declared the winner. In the event of a tie at the end of this time, the Captains shall decide whether the game be postponed or playing continued until a goal be scored, or that it remain a tie.

SEC. 21. On the day selected, if one club only, with at least ten of its regular players and substitutes put in an appearance, it shall be entitled to claim a victory by default. If its opponents refuse to fulfil their engagement, or do not appear upon the ground at the specified time, the club complying with the terms agreed shall be declared the winner of the match, unless the defaulting club is delayed by circumstances beyond its control.

RULE 10. For all fouls except Nos. 13 and 19, the Referee shall have power to suspend the offending player for the remainder of the game, or at his option to warn the offending player for the first offence and to suspend him for the remainder of the game for the second offence. If the player offends after having been suspended once, he shall be removed for the remainder of the match.

For violations of Nos. 13 and 19, the player shall at once be removed for the remainder of the match.

A player shall not:

1. Hold an opponent's crosse with his hands, arms or between his legs; nor hold, strike, or trip him with his crosse; run in front of him or interfere in any way to keep him from the ball until another player reaches it.
2. Hold, strike, or trip an opponent, or push him with the hand.
3. Wrestle with legs entwined, so as to throw an opponent.
4. Touch the ball with his hands, save as in Rule 9, or excepting goal keeper, as in Rule 9.
5. Throw his crosse at a player or at the ball under any circumstances.
6. Move from his position when "time" is called until the ball is again faced.
7. No player except the goal keeper shall stand within the goal crease, nor shall he check the goal keeper while the latter is within the bounds of the goal crease. Any goal made while an attacking player is within the goal crease or interfering with the goal keeper while the latter is within the crease, shall be deemed a foul, and shall not be counted. The offending player and side shall be subject to the usual penalty for fouls. The goal keeper, while within the crease, may not hold the ball on his crosse longer than is necessary to step out of the crease.
8. Use the check commonly known as the "square" or "crosse" check which consists of one player charging into another with both hands on the cross, so as to make the stick meet the body of his opponent.
9. Jump at, or shoulder an opponent from behind while running for or after reaching the ball.
10. Interfere in any way with another player who is in pursuit of an opponent.
11. Deliberately kneel, lie down, or drop in front of an opponent when both are in pursuit of the ball.
12. Attempt to influence the decision of the Umpire.
13. Use threatening, profane, or obscene language to any player, or to the Referee, Umpires, or Field Captains at any time during the match.
14. Forcibly body check an opponent into a fence.
15. Charge into an opponent after he (opponent) has thrown the ball.
16. Wear spiked shoes. (Rubbers excepted.)

17. Persistently throw the ball out of bounds, lie on same, or in any way try to prolong the time of a game.
18. Check an opponent's crosse, or attempt to knock the same out of his hands in any way, unless both players are contending for the ball.
19. Deliberately strike another with his crosse or otherwise.

LAWN TENNIS.

DESCRIPTION OF THE GAME.

LAWN TENNIS is played by two, three, or four people (though very seldom by three) on a smooth stretch of ground called a court which is laid out on a level surface of grass or turf, or occasionally on a broad floor under a covered roof in winter. The court is marked out with white lines on the ground indicating the boundaries, and the space is divided in two by a net three feet in height stretched across the centre from side to side.

Each player is armed with a racket, which is a wooden frame about a foot long and eight inches wide, the oval open space being covered with a fine network of catgut strings, and the frame supplied with a handle about 15 inches long. With this racket the players strike a ball $2\frac{1}{2}$ inches in diameter, of rubber filled with compressed air and covered with felt.

This ball is knocked from one side of the net to the other back and forth until one side misses it—that is, fails to hit it at all, or knocks it into the net, or out of the court. Either side scores a point when the opponent fails to return the ball into his court. The object of the game, therefore, is to knock the ball into the opponent's court so that he cannot return it.

The first player to hit the ball is called the server (he is chosen by lot), and he throws the ball up into the air and knocks it over the net and into the court on the opposite side. After this service is delivered, each side must strike the ball in turn, hitting it either before it touches the ground (a volley) or after it has bounded only once. It is against the rule to volley in returning the service, but after this second stroke of each point, it is optional with the players whether they volley or return the ball on the first bounce.

The method of scoring is simple. The first point won for either side counts 15, and if each side should win one of the two first points, the score becomes 15—all, "all" meaning "even" in every case. The server's score is always called first and the first point therefore makes the score 15—love, or love—15 (according to whether the server or his opponent wins the first point). "Love" means nothing in tennis scoring. The second point for either side is 30 and the third 40. If the server wins the first two strokes, the score is 30—love; if won by the opponent, it is love—30; if each has won a point, the third count then makes the score 30—15, or 15—30, according to whether the

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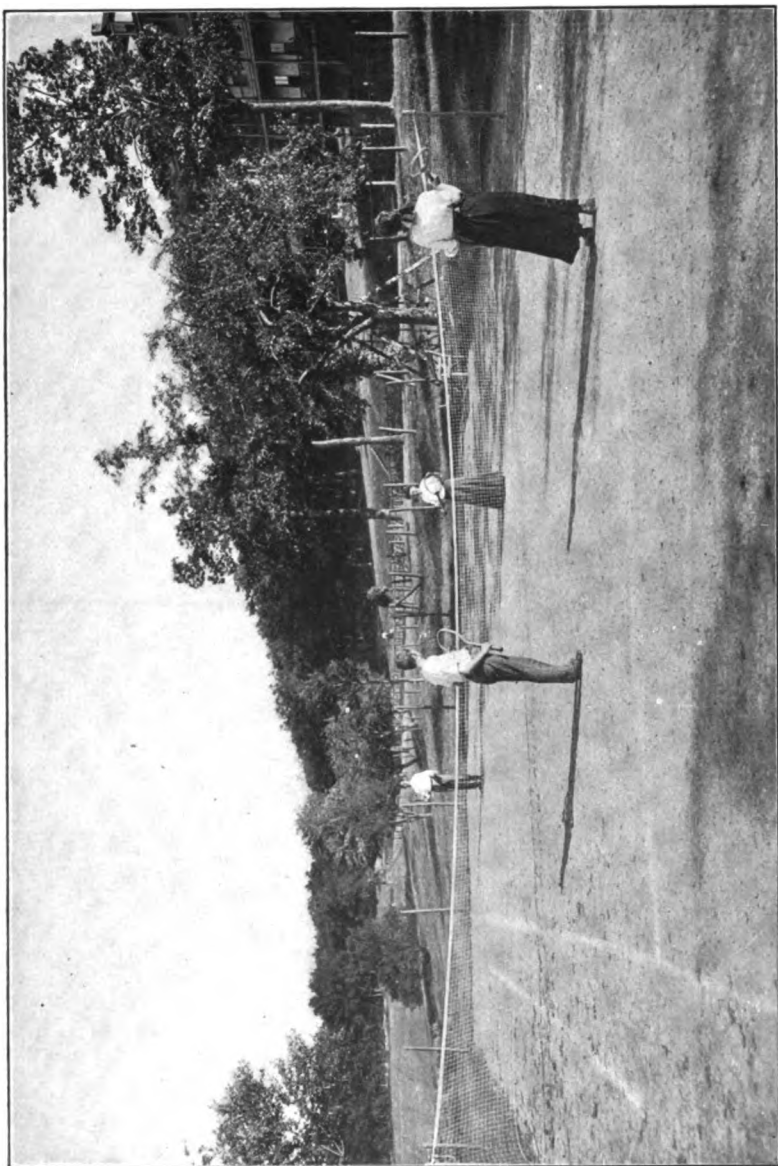
server or his opponent is ahead. Thirty—all follows when each side has won two points; 40—30 or 30—40 when one side has two and the other side three.

Either side wins a game when it has scored four points, unless each side wins three points, which would make the score 40—all, but which is called "deuce" instead. Here lies the only intricacy in the method of scoring. When both sides are tied at 40 or three points each, the score is deuce, and one side must win two more strokes than the other from this point in order to win the game—in other words, if the score once gets even at 40, neither side can win by a single point. From deuce, the score becomes "vantage-in" or "vantage-out," according to whether the server or his opponent is ahead (the server is always "in" and the opponent "out"). With vantage in his favor, either side can win the game by capturing the next point, but if it goes to the other side, the score returns to deuce again, and so on indefinitely until one side or the other has won two points in succession from deuce.

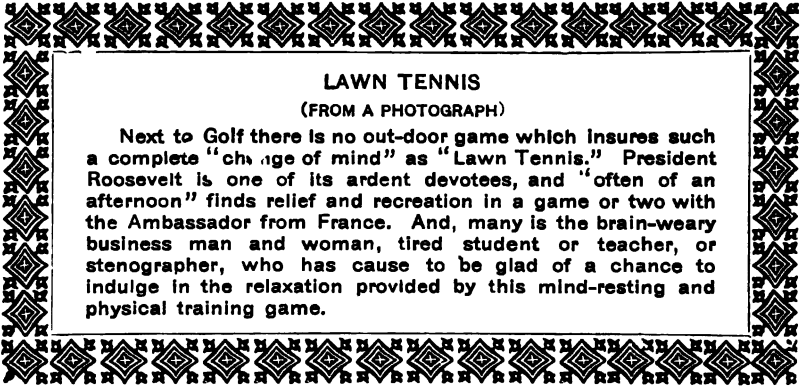
When a game has been won, the other side becomes the server, the service alternating with the games. The score by games is called with the server's score first, or sometimes in matches with the side that is ahead first. When the games are even, the score is called at 1—all, 2—all, 3—all, or 4—all as the case may be, but if it is even at 5—all, then deuce and vantage games are played just as in points during the games. Five—all is deuce and from this point it is necessary for one side or the other to win two games in succession to take the set, that is, as in the games, the set cannot be won by a majority of one, the winner must score at least two or more games than the loser. Most matches are the best two in three sets, although some championship matches are the best three in five sets.

The server must always strike the ball in the air before it touches the ground, but the opponent, who is known technically as the striker-out, is not allowed to strike the ball when first served until after it has bounded once. After these first two strokes, one from either side, the ball is always in play until one side or the other fails to return the ball properly and the opponent then scores a point. Either player, after the first stroke from either side, may play the ball before it has touched the ground, which is called a volley, or after it has struck and bounded once. If it is allowed to touch the ground a second time, the point is lost.

A drive is a fast hard stroke played underhand from the back of the court, and a smash is an overhand volley played very hard and fast to "kill" the ball by the speed of the stroke. A lob is a ball knocked up into the air to pass over an opponent's head, when he is at the net, or to gain time. To cut the ball is to strike it sideways, so that it twists rapidly on its own axis, like a billiard ball with "English," which makes it bound crooked.



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LAWN TENNIS

(FROM A PHOTOGRAPH)

Next to Golf there is no out-door game which insures such a complete "change of mind" as "Lawn Tennis." President Roosevelt is one of its ardent devotees, and "often of an afternoon" finds relief and recreation in a game or two with the Ambassador from France. And, many is the brain-weary business man and woman, tired student or teacher, or stenographer, who has cause to be glad of a chance to indulge in the relaxation provided by this mind-resting and physical training game.

RULES AS ADOPTED BY THE NATIONAL LAWN TENNIS ASSOCIATION.

The Court.—1. The Court is 78 feet long and 27 feet wide. It is divided across the middle by a net, the ends of which are attached to two posts, standing 3 feet outside of the court on either side. The height of the net is 3 feet 3 inches at the posts, and 3 feet in the middle. At each end of the court, parallel with the net, and 39 feet from it, are drawn the base lines, the ends of which are connected by the side lines. Halfway between the side lines, and parallel with them, is drawn the half court line, dividing the space on each side of the net into two equal parts, the right and left courts. On each side of the net, at a distance of 21 feet from it, and parallel with it, are drawn the service lines.

The Balls.—2. The Balls shall measure not less than 2 15-32 inches, nor more than 2 1-2 inches in diameter; and shall weigh not less than 1 15-16 ounces, nor more than 2 ounces.

The Game.—3. The choice of sides, and the right to serve in the first game, shall be decided by toss; provided that, if the winner of the toss choose the right to serve, the other player shall have choice of sides, and *vice versa*, or the winner of the toss may insist upon a choice by his opponent. If one player choose the court, the other may elect not to serve.

4. The players shall stand on opposite sides of the net; the player who first delivers the ball shall be called the server, and the other the striker-out.

5. At the end of the first game the striker-out shall become server, and the server shall become striker-out; and so on alternately in all the subsequent games of the set, or series of sets.

6. The server shall serve with one foot on the ground immediately behind the base line; the other foot may be anywhere except touching the base line or the ground within the court. He shall deliver the service from the right to the left courts, alternately; beginning from the right.

7. The ball served must drop between the service line, half-court line, and side line of the court, diagonally opposite to that from which it was served.

8. It is a fault if the server fail to strike the ball, or if the ball served drop in the net or beyond the service line, or out of court, or in the wrong court; or if the server do not stand as directed by law 6.

9. A fault cannot be taken.

10. After a fault the server shall serve again from the same court from which he served that fault, unless it was a fault because he served from the wrong court.

11. A fault cannot be claimed after the next service is delivered.

12. The server shall not serve till the striker-out is ready. If the latter attempt to return the service, he shall be deemed ready.

13. A service or fault delivered when the striker-out is not ready counts for nothing.

14. The service shall not be volleyed, that is taken before it has touched the ground.

15. A ball is in play on leaving the server's racket, except as provided for in law 8.

16. It is a good return, although the ball touch the net; but a service, otherwise good, which touches the net shall count for nothing.

17. The server wins a stroke if the striker-out volley the service, or if he fail to return the service, or the ball in play; or if he return the service or the ball in play so that it drops outside of his opponent's court; or if he otherwise lose a stroke as provided by law 20.

18. The striker-out wins a stroke if the server serve two consecutive faults; or if he fail to return the ball in play; or if he return the ball in play so that it drops outside of his opponent's court; or if he otherwise lose a stroke as provided by law 20.

19. A ball falling on a line is regarded as falling in the court bounded by that line.

20. Either player loses a stroke if the ball touch him, or anything that he wears or carries, except his racket in the act of striking; or if he touch the ball with his racket more than once; or if he touch the net or any of its supports while the ball is in play; or if he volley the ball before it has passed the net.

21. In case a player is obstructed by any accident, not within his control, the ball shall be considered a "let." But where a permanent fixture of the court is the cause of the accident, the point shall be counted. The benches and chairs placed around the court shall be considered permanent fixtures. If, however, a ball in play strike a permanent fixture of the court (other than the net or posts) before it touches the ground, the point is lost; if, after it has touched the ground, the point shall be counted.

22. On either player winning his first stroke, the score is called 15 for that player; on either player winning his second stroke the score is called 30 for that player; on either player winning his third stroke, the score is called 40 for that player; and the fourth stroke won by either player is scored game for that player, except as below: If both players have won three strokes, the score is called *deuce*; and the next stroke won by either player is scored *advantage* for that player. If the same player win the next stroke, he wins the game; if he

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lose the next stroke, the score returns to deuce and so on until one player wins the two strokes immediately following the score of deuce, when game is scored for that player.

23. The player who first wins six games wins the set; except as below: If both players win five games, the score is called *game all*; and the next game won by either player is scored *advantage game* for that player. If the same player win the next game, he wins the set; if he lose the next game, the score returns to game all; and so on, until either player wins the two games immediately following the score of game all, when he wins the set. But the committee having charge of any tournament may in their discretion modify this rule by the omission of advantage sets.

24. The players shall change sides at the end of every set; but the umpire, on appeal from either player before the toss for choice, shall direct the players to change sides at the end of the first, third, fifth, and every succeeding alternate game of each set; but if the appeal be made after the toss for choice, the umpire may only direct the players to change sides at the end of the first, third, fifth, and every succeeding alternate game of the odd, or deciding, set. If the players change courts in the alternate games throughout the match as above, they shall play in the first game of each set after the first in the courts in which they respectively did not play in the first game of the set immediately preceding.

25. When a series of sets is played, the player who served in the last game of one set shall be striker-out in the first game of the next.

26. In all contests the play shall be continuous from the first service till the match be concluded; provided, however, that between all sets after the second set either player is entitled to a rest, which shall not exceed seven minutes; and, provided, further, that in case of an unavoidable accident, not within the control of the contestants, a cessation of play which shall not exceed two minutes may be allowed between points; but this proviso shall be strictly construed, and the privilege never granted for the purpose of allowing a player to recover his strength or wind. The umpire in his discretion may at any time postpone the match on account of darkness or condition of the ground or weather. In any case of postponement, the previous score shall hold good. Where the play has ceased for more than an hour, the player who at the cessation thereof was in the court first chosen shall have the choice of courts on the recommencement of play. He shall stay in the court he chooses for the remainder of the set. The last two sentences of this rule do not apply when the players change every alternate game as provided by rule 24.

27. If a player serve out of his turn, the umpire, as soon as the mistake is discovered, shall direct the player to serve who ought to have served. But all strokes scored before such discovery shall be counted. If a game shall have been completed before such discovery, then the service in the next alternate game shall be delivered by the player who did not serve out of his turn, and so on in regular rotation.

28. There shall be a referee for every tournament, who shall have general charge of the matches. There shall be an umpire for each match and as many linesmen as the players desire. The umpire may act as linesman also. The umpire shall have general charge of the match and shall decide upon and call sets and also decide whether the player took the ball on the first or second bounce. The umpire shall also decide any question of interpretation or construction of the rules that may arise. The decision of the umpire upon any question of fact, or where a discretion is allowed to him under these rules, shall be final. Any player, however, may protest against any interpretation or construction of the rules by the umpire, and appeal to the referee. The decision of the referee upon such appeal should be final.

The court shall be divided between the linesmen, and it shall be their only duty to decide each for his share of the court where the ball touched the ground, except, however, the linesmen for the base line, who shall also call foot faults. The linesman's decision shall be final. If a linesman is unable to give a decision, because he did not see, or is uncertain of the fact, the umpire shall decide or direct the stroke to be played again.

THREE-HANDED AND FOUR-HANDED GAMES.

29. The above laws shall apply to the three-handed and four-handed games, except as below:

30. For the three-handed and four-handed games the court shall be 36 feet in width; 4 1-2 feet inside the side lines, and parallel with them, are drawn the service side lines. The service lines are not drawn beyond the point at which they meet the service side lines.

31. In the three-handed game, the single player shall serve in every alternate game.

32. In the four-handed game, the pair who have the right to serve in the first game shall decide which partner shall do so; and the opposing pair shall decide in like manner for the second game. The partner of the player who served in the first game shall serve in the third, and the partner of the player who served in the second game shall serve in the fourth, and the same order shall be maintained in all the subsequent games of the set.

33. At the beginning of the next set, either partner of the pair which struck

out in the last game of the last set may serve; and the same privilege is given to their opponents in the second game of the new set.

34. The players shall take the service alternately throughout the game; a player cannot receive a service delivered to his partner; and the order of service and striking out once established shall not be altered nor shall the striker-out change courts to receive the service, till the end of the set.

35. It is a fault if the ball served do not drop between the service line, half-court line, and service side line of the court, diagonally opposite to that from which it was served.

36. It is a fault if the ball served do not drop as provided in law 35, or if it touch the server's partner or anything he wears or carries.

MOTORING: THE EVOLUTION OF THE AUTOMOBILE.

BY

CHARLES WELSH.

You can make all the motors run some of the time, and some of the motors all of the time; but you can't make all the motors run all of the time.

WHEN that famous old fraud, Mother Shipton, prophesied in the time of Henry VIII. that "Carriages without horses shall go," she was only prophesying after the event, for sails, windmills, and springs had been employed as means of power locomotion on common roads early in the sixteenth century. These early inventions, it is true, were rude, clumsy, and imperfect. Johann Hausted, of Nuremberg, for example, made a chariot about this time which was propelled by springs. It was capable of a speed of one and a quarter miles an hour! A veritable Nuremberg toy alongside of our modern machines with a record of seventy-five miles an hour.

But far-sighted men had believed in the possibility of automobility for hundreds of years. The automobile was foreshadowed by Roger Bacon in the thirteenth century, for he wrote, "We will be able to propel carriages with incredible speed without the assistance of any animal."

If we take a hasty glance along the stream of Time, noting by the way what the last four hundred years have brought forth in the shape of self-propelled carriages, we shall remark that the great Newton suggested propulsion by the reaction of a steam jet in 1680, and that Father Verbiest, a Jesuit missionary in China, actually constructed a machine so propelled in 1665. The celebrated engineer, Pupin, built a model for a road carriage to be propelled by an engine with a cylinder and piston, and as soon as steam began to come into practical use the idea of self-propelled vehicles became very general, and many busy brains set to work on the problem.

The great Frenchman, Cugnot, who constructed the earliest practical power locomotives for road use during the years 1763-1771, may almost be called the father of automobilism. His first carriage was

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designed to transport cannon. His second steam carriage, built in 1770, is still preserved in Paris at the Conservatoire des Arts et des Métiers. "The ideas of Cugnot," says the Marquis de Chasseloup-Loubat, "were an entire century in advance of the mechanical means by which they could be realized."

The attempt led to no satisfactory results. Everything was defective—motive power, steering, control. Nevertheless the carriage ran, and ran so well that it broke down the enclosure of the ground on which it was tried. It is an incontestable fact that Cugnot is the inventor of automobile locomotion, and that the honor of first having imagined and realized a new method of transport, estimated to play an important part in the welfare of many lands, belongs to him.

F. Moore in London, 1769, and Livingston, in 1784, were well-known makers of steam carriages of a kind, as were also Oliver Evans and Nathan Read in this country, who made some serviceable machines.

It was the idea of the automobile that led to the invention of the steamboat. Late in the eighteenth century John Fitch, of Hartford, Conn., conceived the idea of a steam carriage. It occurred to him to construct it so that it could cross a river, and this led him to build the first steamboat, which he ran on the Connecticut River. The first horseless steam fire-engine was devised by Frank Curtis, of Newburyport, Mass., shortly after 1860, and it ran successfully under its own steam. In 1867 Mr. Curtis built a steam carriage with a speed of twenty-five miles an hour, and it ran for eleven years.

But to return to our chronological order, there is one machine made by Wm. Murdock, in England, about 1784, which is still in good working order, and the celebrated Cornish engineer, Trevithick, began to build road engines in 1803. The first compressed-air auto-car was made about 1810. "It was in England toward the third decade of the nineteenth century," says the authority before quoted, "that we saw the idea of Cugnot reappear. The same impulse which moved English engineers to build railroads in order to free the great industrial centres from the economic tyranny of those who constructed canals urged them to study methods of automobile locomotion on highways. That is to say, in its inception automobile locomotion was considered as an auxiliary to the railroad, which it really is."

Unfortunately the promoters of the railway lines did not at all understand the respective spheres of action of the machine on the rail and the machine on the road. They took umbrage at automobile locomotion, and since they had much capital and influence at their disposal, they secured a law from the English Parliament which effectually killed automobile evolution. It ordained among other things that a man carrying a red flag by day, or a red lantern by night, must be kept a hundred yards in advance of every automobile vehicle.

Until about 1840 steam was a common motive power for road vehicles. The road engine then, as the bicycle and automobile to-day, led to great improvements in road building in England and on the

Continent of Europe. The famous MacAdam, Telford, and Neill, men whose names are indissolubly connected with the best modern road-making, flourished at about this time. But British ingenuity never succeeded in making the light and easy-running machines which the Frenchmen and the Americans achieved in these later years.

With the coming of the railroad, the road-engine was practically doomed for the time, although in reality the former was the outcome of the craze for the latter.

The vested interests in the railroad, as we have seen, soon became so enormous that legislation was directed to the restriction of the road-engines, and they were employed under all sorts of crippling rules and regulations besides these referred to, until they practically disappeared, and their more powerful and swifter rival held the field alone for steam transportation for men and merchandise until the modern revival, which may be said to have had its origin in about 1878, when Leon Bollee, a French engineer, established his auto-car, which weighed three and a half tons. Compare this with the modern Daimler petroleum motor, which weighs but one ton and will do twice as much work. In 1886 Count Albert de Dion in his steam automobile showed what was the first practical horseless carriage of the modern type. Another Frenchman, Serpollet, was among the beginners of the modern perfect steam auto-car, and from Germany comes the first oil motor—the Benz.

A great step in the popularization of the auto-car was made in the early nineties, when the owners of *Le Petit Journal* of Paris organized a race between the various makers which attracted world-wide attention, and in 1898, when the Exhibition was held in Paris under the auspices of the Automobile Club of France, at which 1100 vehicles were shown and thirty thousand spectators were present.

A great impulse to the development and use of the automobile in England was given by the withdrawal in 1897 of many of the laws which had hitherto hampered and restricted them. Meanwhile our own inventors and manufacturers were not idle, and they soon set about working out the possibilities of the machine and developing it, until to-day the American automobile, if it does not lead the world, is at least abreast of those of the pioneer countries of Europe. In June, 1896, an automobile contest organized by the proprietor of the *Cosmopolitan Magazine*, was made in New York from the City Hall to Tarrytown on the Hudson and return. And this seems to have given a remarkable and powerful impulse to automobile industry in this country. It attracted attention all over the country. The winner was the Duryea gasoline motor-wagon.

It was these and other contests which brought about the formation of the American Automobile Club, with headquarters in New York—which has now a large and increasing membership roll. It has already coöperated with the League of American Wheelmen in their

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good work on behalf of good roads. It is said that in the summer of 1898 there were not thirty automobiles in the United States, but by August, 1899, at least eighty companies had been organized, with an aggregate capital of nearly \$400,000,000. Two years later over three hundred firms were making automobiles, while to-day these figures may fairly be doubled, although there are no reliable statistics available.

The patent office records furnish a sure indication of the directions in which the minds of our vast army of inventors are running, and of the interest taken in any given industry. No less than 275 patents dealing with automobiles in some shape or another were recorded during the last ten years of the nineteenth century, and the annual average since then has been considerably larger.

This enormous industry has naturally led to the establishment of important periodicals devoted to its interests all over the country,—east and west, north and south. About twenty such periodicals are extant to-day, and the magnitude of the industry is reflected in the most striking manner by the immense advertising patronage which they enjoy. Automobile literature in Europe is as extensive. The number of books devoted to the subject, the attention it receives in the magazines, and the number of new automobile journals which spring up every week is too great even to be chronicled here. But it is not necessary to go to the trade journals to see this. It is scarcely possible to take up a magazine or a newspaper to-day without being reminded of the presence of this new industry, and the streets of every great city, and every highway in the United States, give evidence that this great adjunct to, and developer of, commerce has come to stay.

We have referred to the effect of the automobile and the cycle on the development of good roads, and have given some idea of the enormous industries to which it has given rise, furnishing employment to hundreds of thousands throughout the country. But this new means of locomotion is doing more than this.

As men "run to and fro, knowledge is increased," new tracts of country are opened up not only for the traveller for pleasure, but for profitable purposes as well. The chief interest in the automobile has hitherto been in its usefulness for the transportation of man. It is now receiving considerable attention as affording increased facilities for the transportation of merchandise, and it may be the means for sending a great proportion of the dwellers in crowded cities back to the land. With increased facilities of cross-country transportation there comes the possibility of that *petite culture*, in which "every rood of land maintains its man," such as is found *par excellence* among the prosperous and contented peasantry of Belgium. Of course we must have our agriculture on the grand scale in the West, but around and about our Eastern cities there are countless acres of land which might be turned to profitable use, if only there were cheap and easy methods

of bringing their produce to market, and the automobile may be the means of accomplishing this.

Indeed, it has already done so in England and in Europe. The use of motors for farm and market work is capable of enormous development. But there is no limit to their employment. The War Department, the post-office, the doctor, the commercial traveller—all must use the automobile in the time to come, and as has been well said, "the revolution worked by railways is a small thing compared with the revolution now being produced by the motor-car."

We have seen that there are three great periods in the evolution of the automobile—first, the long period of its inception before the invention of railroads, and its partial development in the earlier decades of the nineteenth century. Then the period of abeyance, when it was eclipsed, if not driven out of existence, by the railroad power, and last, the great modern revival of the past twenty-five years.

Electricity, steam, and gasoline or naphtha are the three main sources of power that do the bidding of the man behind the lever. Other sources of power, such as compressed air, liquid air, carbonic acid gas, and alcohol, have been experimented with, but are regarded as impracticable by expert authorities. In large cities, the electric vehicle was the first to come extensively into favor. It is especially adapted for all city uses, for it is without odor or vibration, and is almost noiseless; but so long as it is obliged to depend upon a storage battery it must be very heavy and can run but a limited distance—about twenty-five miles—without recharging. Therefore the automobiles run by steam or gasoline are superior for long-distance purposes.

It is not within the province of this paper to enter into technical mechanical details of the evolution of the automobile. Increased power combined with diminished weight, higher speed, with smooth-running, accurate, and simple steering gear, perfect lubrication, and absolute control, are the directions in which it is being evolved before our eyes, and it is in these directions that manufacturers have been moving during the past twenty-five years. Every day sees some superfluous part removed, some simplification introduced. Every month or so these modifications bring about a reduction of cost both of the machine itself and in its maintenance. Every day also sees some new adaptation of it to commercial purposes.

The evolution of the form and shape of the automobile is one of the most interesting features of its development. The first railroad carriages were just the ordinary coaches on flanged wheels to keep them on the track. The adaptation to conditions gradually brought about our magnificent hotels on wheels, in the shape of parlor, dining, and sleeping cars. So the first motor-carriages were built on the plan of the ordinary horse carriage, but every day sees a departure from that form and a development more in accordance with the conditions. What the ultimate type will be it is difficult to forecast, but it will

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doubtless develop into a bluntly pointed front—a tendency, perhaps, to cigar shape—and a much lower body, probably within a step of the ground.

As we have indicated, the cost of automobiles is in a state of constant change. From the catalogues of the leading manufacturers, issued in 1904, it appears that an electric speed road wagon of one of the leading types can be bought for \$850 fully equipped, and larger and more expensive types up to \$2000. These carriages are started as easily as turning on an electric light. The brakes are simple and easily handled, and the hitching-strap is done away with by the fact that all that is necessary to secure your finding the vehicle where you left it is to take out the starting plug and put it in your pocket. Goods-delivery wagons of the same motive power, and with the same general equipment, cost from \$1400 upward, according to size and carrying capacity. An electric carriage for family use costs about \$2000, and an omnibus from \$3000 to \$4000.

The prices of gasoline vehicles range from \$1000 for a first-class road carriage to \$4000 for an omnibus. The cost of running may vary from fifty cents to \$1.00 and more per hundred miles, according to the size of the machine.

The driver of gasoline vehicles must know something of the principle of the machine, and is often called upon to apply his knowledge. But he can go anywhere—up hill and down over the worst roads, through mud and snow, and can go at any rate he chooses. He can buy his fuel in any village street and in every city, and is not dependent upon electric-charging stations. Therefore, as we have said, for touring purposes the gasoline vehicle has great advantages over that propelled by electricity.

Steam has been more generally applied to the heavier classes of vehicles, though some pretty lighter ones have been made, chiefly in this country. They are easily started and easily stopped, and fuel and water can be obtained anywhere; but they have obvious disadvantages and have not come into general use for passenger purposes.

Records, like "promises and pie-crust," are, as we all know, made to be broken, and almost every day sees the old ones shattered and new ones made. Speed of seventy-five miles an hour, attained on an ordinary road in France, and a three thousand mile trip lasting fifteen days and two hours in this country, were two of the records for 1904.*

A last word on the evolution of the automobile should be on the subject of the evolution of public opinion with regard to it. When the bicycle was becoming popular, the prejudice against it from pedestrians and drivers was unbounded, and the automobile has been even more severely attacked, perhaps not altogether without reason. But as the driver of the automobile becomes more expert, and the public

* The latest will be found on a later page, among "One Hundred Best Events on Record."

becomes more accustomed to them, these prejudices will die out. Horses are being educated to meet motors without shying, as they were educated to meet railroad trains, trolley cars, and bicycles, and familiarity is daily breeding—not contempt, but the necessary added care on the part of all concerned, which this new method of locomotion calls for.

MOTOR-BOATING.

WHAT is more delightful to while away an hour or two of a sunny afternoon than a spin up the river at a steady five or six miles an hour, without the slightest fatigue? What the light car is to the road the small motor-boat is to the river.

To many people, especially those within convenient reach of our rivers and canals, and at seaside resorts, the attraction of a spin upon the water is irresistible. Their ambition is to be possessed of a small motor-boat, but the question of cost is so much an inscrutable mystery that they hesitate and finally dismiss their desire as being impossible, owing to the limited length of their purse-strings.

The motor-boat has so many advantages over the simplest motor-car that a great many people would much rather boast a boat than a car. There are fewer integral parts, and less liability to breakdowns. There are no change-speed gears about which to worry, nor differential gears to cause any anxiety. Moreover, there is no trouble in connection with the facilities for cooling the motor so long as the engine is fitted with a powerful pump. The driver does not have to husband his cooling medium after it has passed through the cylinder jacket, for he can discharge it directly into the water and draw fresh supplies from an illimitable source.

The fundamental components of a motor-boat are the motor; invariably a reducing gear, to reduce the number of revolutions of the engine shaft for the propeller shaft (since it is obvious that a speed of 1500 or more revolutions per minute in the engine is utterly unsuited to the propellers); the propellers, together with reversing gear—though every boat is not fitted with the latter mechanism, the propeller simply revolving in a forward drive. The reversing gear, however, is invaluable, especially when it is desired to arrest the speed of the boat suddenly or to manœuvre, and is well worth the extra cost.

A motor-boat is no more exposed to the danger of fire than a motor-car. All fear of fire can be easily overcome by the exercise of cleanly and careful habits. The bottom of the boat beneath the engine should be kept scrupulously free from all accumulation, then no fear of fire need be entertained, and the boat will be as safe from this danger as a car or a bicycle.

The great efforts are toward a practical, every-day, moderately

speedy, safe, and reliable craft, that can be used as a tender for a larger boat or for cruising on its own account. The motor-boat, with a speed of from fifteen to eighteen miles an hour, and that can be relied upon to reach its destination, has much to recommend it to a yachtsman, and its use in naval affairs is unlimited.

The motor-boat's great field lies, however, among those who cannot afford a larger craft—the hundreds who satisfy their craving for sea life with a small sailboat or a steam-launch. The motor-boat is of such light draught that it can go almost anywhere in any river or lake, and its ease of handling recommends it to those who have not sufficient mechanical knowledge to operate a steam-launch or a launch with the regular type of marine motor. The manufacturers have devoted much attention to the production of an easily operated boat, and, working along the lines previously followed by the automobile manufacturers, have turned out boats which can be run with very little care.

MOTORING.

BY

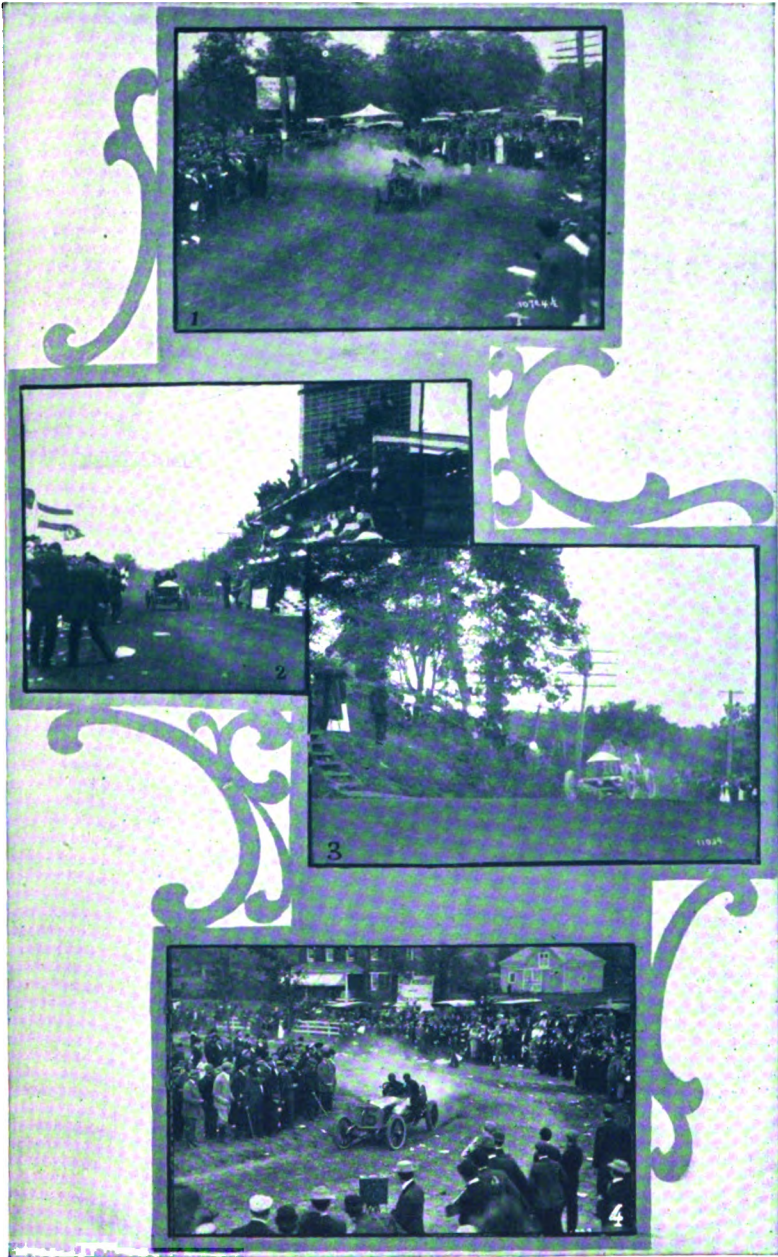
SIGMUND KRAUSZ, AUTHOR OF "KRAUSZ'S COMPLETE AUTOMOBILE RECORD."

The Care of an Automobile.

WITH the simplification of the mechanism, the introduction of automatic lubrication, and the protection of the machinery against road dirt by means of metal aprons and gear casings, etc., the modern automobile does not give half as much trouble in its care-taking as of yore. Nevertheless, the man who runs his car himself, and wants to do it on an economical basis, will find that it takes considerable attention to keep an automobile in good condition, which is the only way to get proper service out of it. Neither should his attention, in the form of supervision, be omitted in case a chauffeur is employed, as many of these are only too negligent in the care of the vehicles entrusted to them. In both cases an intimate knowledge of the working parts of the machine is a necessity.

Undoubtedly, the most important thing in the preservation of the motor mechanism is the lubrication; but while a modern automobile, as a rule, has an effective system of automatic oiling for the principal parts of the motor, transmission, etc., there are still numerous components of the car which need personal attention. According to the wear to which the various parts are subjected, they will need more or less attention and a larger or smaller quantity of oil, the quality and

From Krausz's "A. B. C. of Motoring." Chicago, Laird and Lee. Copyright by Sigmund Krausz. By permission.



THE VANDERBILT INTERNATIONAL AUTOMOBILE
RACE, 1906

1. The Dietrich at Hampton Turn.
2. Wagner Winning the Race in his Darracq.
3. Wagner Climbing Manhasset Hill.
4. Clement in the Clement Bayard.

consistency of which differs again according to the mechanism on which it is employed. The instruction booklets of the manufacturers give general information on this subject, but practice soon teaches the driver the best medium of lubrication.

It is superfluous to point out that the tanks and oil-tight casings for automatic lubrication of motor and gears should always be kept filled with their proper grease, so as not to need attention during the running of the car, but it is of just as much importance to see that the little nuts, screws, pipes, etc., which form part of the system, are properly looked after, since neglect in this regard often causes trouble.

Less frequent attention is demanded by the clutch and such parts as are included in the running gear system, as axles, hubs, springs, clips, etc., but care of them, at regular intervals, will well repay the trouble. Purely metallic friction clutches need, however, much more oiling than leather-faced ones. These are kept in good shape by an occasional wiping with a kerosene-soaked rag which removes the road dust. The leather facing should be renewed before it is much worn.

In the case of axles, which are lubricated by consistent grease in oil-tight casings, it is advisable to remove the wheels every six months or so for the purpose of thorough cleansing and re-filling with fresh grease. Hubs, according to the use of the car, may be lubricated every two to four weeks. Springs should always be greased as soon as the slightest squeaking is noticed.

In chain-driven cars, the chain and sprocket need much attention, as gritty mud and dust adhere to them in quantities, and cause considerable wear of the chain links, besides affecting the speed of the car to some extent. The drive chain should always be removed and cleaned after long tours. An hour's soaking, with subsequent washing in kerosene, will remove the dirt, and, after an oil bath, and dripping-off of the superfluous lubricant, the chain is again ready for use.

It is well to remember, in connection with the subject of oiling, that there is such a thing as too much lubrication, and that during the colder season thinner oil may be profitably substituted, in the oil pumps, for a heavier grade.

As to gasoline, this should always be supplied to the tank through some suitable filter, in order to keep out impurities which are apt to clog the fine channels of the carbureter, causing infinite trouble thereby, and in handling this fuel it should never be forgotten that night is not the time for filling a tank, and that a burning pipe, cigar, or cigarette is a dangerous neighbor. Where a larger quantity of gasoline is kept at hand, it should be stored in an underground reservoir at a safe distance from buildings.

It goes without saying, that the same rule of cleanliness applying to gasoline should apply to the water for the cooling system. Dirty water causes a sediment in the pipes which hinders the circulation. A fine sieve at the point where the water tank is filled will be found

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of good service. Strongly alkaline water should not be used for cooling purposes, as it leaves a hard deposit on the heated parts of the motor, which is difficult to remove and causes trouble in the cylinders. The pump connections and other parts of the cooling system need occasional inspection and tightening. Freezing of the water in the apparatus must be prevented by all means, and, during winter, in an unheated garage, the cooling system should be thoroughly drained between use. If no good anti-freezing solution is employed, freezing, during short stops, can be prevented by letting the motor run at slow speed. During long stops it is more economical to drain. Relating to anti-freezing solutions it must be remarked that they tend to corrode, more or less, the metal parts with which they come in contact.

The carbureter, being the seat of much trouble when not perfectly working, should always be kept scrupulously clean, and it is not a bad plan to occasionally take it apart for the purpose.

In the ignition system, constant attention should be paid to perfect contacts, and these points should be cleaned from time to time with kerosene. The spark plugs must be inspected quite frequently as they are apt to get foul, in which case they cause misfiring. When examining them, the points of the sparking wires, if not at proper distance, may also be readjusted. The correct distance is about 1-32 inch. The isolating substance of the wires should be protected against the damaging effect of oil by wiping it off whenever necessary. As to the brakes, they will need an occasional readjustment and cleaning of the steel bands.

Tires in use ought to be always well inflated and, if practicable, repaired on the spot in case of puncture, as running a car any distance on a flat tire ruins not only the inner tube, but also the outer cover, and is a costly proceeding, considering the price of tires.

If the car is out of use for any length of time, such as during the winter, the tires should be inflated only sufficiently to carry the weight, or they may be altogether removed, in which case they should be kept in a dark and moderately cool place.

The car itself, after returning from a dirty drive, should be washed as soon as possible by means of a hose, wiped with a soft sponge, and polished dry with a soft chamois skin or clean waste. The upholstery may, from time to time, be rubbed with a vaseline rag to preserve the pliancy and lustre of the leather.

In general it may be said that it is better to spend the time necessary for the proper care of an automobile shortly after, than just before using it, when, in most cases, the work can be done more leisurely and thoroughly.

In conclusion, the motorist may be advised that it is a good plan to keep track of all expenditures in connection with the car, such as fuel, oil, repairs, supplies, etc., as it is a satisfaction to know, at the end of each season, just what the maintenance of the car

has cost. If an odometer has been attached to the vehicle, it is then, too, easy to figure out the running cost per mile. "Krausz's Complete Automobile Record" (Laird & Lee, Chicago) will be found the most practical book for this purpose.

The Art of Driving.

It is supposed that an intelligent man, having had no previous experience with automobiles, will make himself familiar with the various working parts of the motor mechanism before he attempts to drive a car himself. This in order to better reason from cause to effect. It is easy enough to learn to steer an automobile, but unless you know your machine thoroughly, this knowledge alone may not always be sufficient in case of a sudden emergency. Theory alone, however, is not enough. It takes practice, considerable practice, to acquire that nerve and rapidity of judgment which the motorist is often called upon to display, especially when driving in the crowded thoroughfares of a city, and what is said here is, therefore, only intended to serve as a useful hint to beginners.

Let us suppose you are in the act of starting for a drive, after you have imbibed some theoretical knowledge. You will do well to convince yourself, in the first place, that gasoline and water tanks are filled, carbureter connections and oil pumps open, all not automatically lubricated parts well greased, that the ignition apparatus is in good order, and the tires are properly inflated. Also see that the engine is out of gear, brakes and levers are working properly, and, in general, everything in tip-top shape.

After satisfactory inspection, step to the front of the car to start the motor, but not before you have turned on the switch for the ignition, and retarded the spark lever to proper position in order to avoid back fire and a consequent kick from the starting crank. In starting the motor of a light car, it is best to give the starting crank, after having pushed it tightly against the crankshaft, a few swift turns which, under ordinary conditions, will put the engine in motion. In high-powered cars considerable effort is necessary to force the crank over the compression, and it is advisable to use the power of the flywheel for the purpose. This is done by pulling the starting crank towards you, and letting it go again. If this is repeated several times, it will be found that the stored energy in the flywheel, with the further aid of a strong pull, is sufficient to start the engine going.

The motor being in motion, see whether oil pumps are acting, take your seat behind the steering wheel, and place, with one hand on it, the front wheels in straight direction. Release handbrake. Put the speed lever to first speed notch and, simultaneously, by depressing the proper foot lever, let in the clutch as gradually as possible in order to avoid a jerk. This will slowly start the car.

It becomes necessary now to watch how the manipulation of the

steering wheel affects the direction of the car, and for that purpose keep going at slow speed, without changing the position of the spark lever and throttle from that in which they were at the starting of the motor. Having observed and practised sufficiently the action of the car in response to the turns of the steering wheel, the spark may be slightly advanced, which will increase the revolutions of the motor and, with it, the speed of the car. It may be observed here that for the practice of driving, a dry straight road should be selected where there is little or no traffic, and that no attempt should be made to change to higher speeds before one feels safe in handling the car on the lower ones.

The change from a lower speed to the next higher one is effected by the simultaneous pressing of the clutch pedal, which releases the clutch grip, and moving of the speed lever from the first to the second, second to the third, or third to the fourth notch, as the case may be. In changing from lower to higher speeds it is well to increase, immediately before doing so, the revolutions of the motor by advancing the spark and retarding it again, as far as possible, at the moment of moving the speed lever.

In connection with this subject, it is well to remember that in going from lower to higher speeds, the speed lever should be moved with a short, quick motion. In the reverse case, the change should take place softly and gradually, and the revolutions of the motor should be diminished immediately before the change. In short, the process of going from a higher to a lower speed is exactly the opposite from that of going from the lower to the higher, described in the previous paragraph.

The reverse gear should never be operated while the car is going at high speed, except in cases of impending danger. In fact, the speed lever should be brought to lowest speed before reversing.

To momentarily diminish speed, the clutch has to be disengaged by depressing the clutch pedal, and to stop, the handbrake should be gradually applied in addition. If the stop is only temporary, the engine may be thrown out of gear, slowed down by means of the accelerator and retarding the spark lever, and allowed to run free. On returning to the garage stop and throw out of gear the motor, shut off gasoline and oil supply, turn off switch and, if necessary on account of coldness, drain the cooling system.

The beginner is especially warned to restrict himself during his early practice, even in a lighter car, to the first two speeds, and to withstand the temptation of not allowing other motorists to overtake him, a temptation which is strong in a novice who begins to feel that he is getting to master his machine. It will also be well for him to practise the use of the brakes and the entire shutting off of power for the purpose of learning to make quick stops, even if this is done at the cost of some wear to the tires. Once thoroughly familiar with this process, it should only be used when absolutely necessary, as too

sudden stopping is a tremendous strain on the tires, and often causes skidding, even on dry roads.

Special care should be taken when driving on wet asphalt pavements or other slippery roads, and more so if the tires are worn and unprovided with an anti-slipping device. Under such conditions, sometimes a slight movement of the steering wheel or an obstacle in the road is sufficient to cause skidding, and in this case, the novice will always feel tempted to apply the brakes. This is a mistake which, however, is not apt to be serious if the car is going at slow speed. On the other hand, the applying of the brake to skidding wheels is a dangerous affair when occurring at high speed. It is by far better to shut off the power entirely, as the car, while running on the momentum only, is easier of control, and the power, unless the car has stopped or is moving too slowly, can be picked up again on a slow speed when it is seen that the vehicle once more obeys the steering wheel.

The noise of the engine is a point which should be studied, in order to be able to distinguish by sound whether there are any defects, or whether, in cases of hill-climbing, the engine has arrived at its limit of power, in which case a change to lower speed is necessary to prevent the stopping of the car.

With advancing proficiency in driving, it is well to pay attention to the economical running of the car in the way of using less fuel by the proper handling of throttle and spark lever, and allowing the vehicle, in suitable places, to run on its momentum with spark and mixture supply entirely shut off. Having mastered the intricacies of driving, and with growing practice, the driver soon will learn to observe and distinguish, without taking his attention from the road, all the various noises of his machine which either indicate that everything is all right, or that there are defects in certain parts of the car mechanism which need looking after. Having arrived at this point, he will fully enjoy the pleasure of motoring in a self-driven car.

As to the proper conduct of the driver on the public roads, a careful perusal of the following is earnestly recommended.

Automobile Etiquette.

General Hints to Owner and Driver.

There is unquestionably a strong prejudice against motorists in general, while sure to be overcome in due time, is to-day a factor never to be lost sight of by owner and driver. In order sooner to eliminate this prejudice, the following points should always be kept in view:

1. Become well acquainted with the laws and regulations of your state and municipality relating to automobile traffic, and obey them rigidly.
2. Don't take intoxicants when you expect to go behind the steering wheel, or even when being driven by your chauffeur. Chance may force you to the driver's seat, and liquor is the worst enemy of an automobile driver. In engaging a professional chauffeur give preference to a total abstainer; otherwise see that he is in perfectly sober condition when you want his services.
3. See that your car does not emit too offensive an odor or too much smoke. With a little care this can be prevented, just as well as the excessive dripping of oil which especially damages the asphalt pavements.
4. Don't make too liberal use of the horn. It is annoying and often confusing. Use it when necessary.
5. In driving in the city, always consider that you don't own the road, and that other vehicles, cyclists, and pedestrians have the same rights as you. Never allow your attention to be diverted from the road ahead of you, and keep

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a sharp lookout at crossings, near crowds, and especially in streets where children are playing in the road or on the sidewalks. The latter are apt to run out into the street in the excitement of play. Don't get out of patience if, in a spirit of mischief, they throw things at the car, or apparently, try to cross in front of it. It is aggravating, but it is better to stop than to take chances. If something happens the public will be against you, no matter how innocent you are in the matter.

6. In driving over country roads, use judgment as to speed. Never drive fast unless you can overlook the road for a considerable distance ahead of you, and unless it is absolutely free of obstructions in the shape of man or beast. By no means exceed the speed allowed for the location. In meeting a horse-drawn vehicle remember that country horses are not usually broken to automobiles. Slow down in passing, especially if their driver gives a sign to that effect. If the animals appear much frightened, stop your engine until the vehicle has passed you. Be considerate as to animals on the road, and if you happen to inadvertently kill or maim one try to find its owner. Don't run away. Car numbers are easily read, and it is much cheaper and more convenient to settle amicably on the spot than to be cited to court. Remember this maxim too in case of collisions where the damage extends only to material.

7. In case of accident to human beings, resulting in injuries or fatalities, whether caused by your own carelessness or not, show kindness and utmost consideration. Act as a man should act. Don't shirk responsibility. Give your name and address willingly to the interested parties, but be careful to establish the responsibility for the accident, there and then, by witnesses if you are not at fault. In any case, show humanity, and drive the injured to where he can get quickest medical aid. Consideration and kindness will always act as a mitigating circumstance when it comes to a jury trial. Brutality is a boomerang.

8. Stop at the first sign given by a police official, and don't get into a heated argument with him, even if you have the right on your side. A little politeness often saves trouble and fines.

9. Carry insurance against damage to your car, as well as against financial loss resulting from damage suits of any nature arising from motor accidents. There are companies making a specialty of such insurance. Under no conditions, however, allow the fact that you are insured to operate against due care in driving your car and the general observation of the hints given above.

POLO AND SOME FAMOUS PLAYERS.

BY

J. J. McNAMARA, POLO AND AUTOMOBILE EDITOR, "BOSTON HERALD."

POLO is a man's game, as in order to play it successfully the highest development of the very best qualities in ideal manhood are absolutely necessary in addition to the skill required in playing individual positions and helping out in team work; and another important point is horsemanship, without which no man can win laurels on a polo field.

Some of the qualities required of the player are a lively, active brain which can size up a situation instantaneously, and judgment of a superior nature also forms a prominent part in the make-up of your high-class polo player. An eye for the game which must be as true as that of a court tennis player is essential, a spirit of unselfishness must also be cultivated, and besides physical courage and endurance are not the least important factors in the make-up of the gentleman whose fancy turns to the most attractive game in the realm of outdoor sport. The riding is unlike the style taught by the riding master for the park bridle path or the seat used for hunting or racing. In polo the riding must come by second nature, and the man and the

horse must work together in perfect harmony or golden opportunities will be lost. It is a game of constant activity, and any man who has ever played it will tell you that there is nothing just like it for pleasure and recreation.

As in other branches of sport the best players in America, or in the world for that matter, are men who grew up in the game, or who learned how to ride when they were young. This is particularly true of such well-known players as Foxhall Keene, John E. Cowdin, Harry Payne Whitney, Lawrence Waterbury, J. M. Waterbury Jr., W. Cameron Forbes, Allan Forbes, R. G. Shaw 2d, R. L. Agassiz, Thomas Hitchcock Jr., D. Milburn, Rene La Montagne Jr., Maxwell Norman, and other prominent polo players who learned to ride in their teens and subsequently took up polo. Of course there are exceptions to every rule, and a case in point of a man, who did not begin to ride until long after he was out of college, and who developed into a first-class polo player, is that of Joshua Crane. He had all of the other necessary qualifications, and in the early days of his polo experience his riding was the chief handicap against him. There is one thing, however, which prevents polo from becoming as popular as other forms of sport, and that is the money it takes to play it.

The chief expense is ponies, which cost anywhere from \$300 to \$1000, or higher, and as a man must have at least four good ponies, it can readily be seen that polo is not a poor man's game. George Gould recognized the desirable qualities of the game, and in bringing up his sons he reckoned that if polo was a good thing for men it likewise contained valuable opportunities for training the youthful mind in the right direction as a part of the general education of his sons. With this object in view Jay and Kingdon Gould began playing in matches when they were 12 and 13 years old on their home grounds at Georgian Court, and later on they appeared in regular tournament games on the Polo Association circuit. Both of the boys were quick to learn the good points of play from the elders with whom they were associated and they developed rapidly in skill and knowledge of the game, and mounted on the very best of ponies they were able to bring their superb horsemanship into effect in winning trophies. These two boys had a perfect understanding and a definite course of action to pursue in every game in which they played, and their skill in this direction was of the same general nature as that which characterized the playing of the famous Waterbury brothers, who were also brought up on horseback, so to speak. There is a valuable lesson in the experience of these Gould boys in sport at an early age. Kingdon Gould is now a student at Columbia University, and he gives every promise of rounding into a man who will some day be eminently qualified to sit in Wall Street and direct the great industrial and railroad affairs of the Gould family. He still keeps up his interest in polo and other games, for which ample provision is made at Georgian Court. Jay Gould is not only a high-class polo player, but he has already won

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fame as a boy that few men ever attain in the difficult game of court tennis. He began playing the latter game about the time he took up polo and he performed the unprecedented task of winning the court tennis championship of the United States at the age of 17 years, and then went abroad for the world's championship, in which event he was the runner up.

Jay Gould to-day is a fine type of healthy, young, vigorous manhood, and when he is through with his studies he will be all the better equipped for the serious task in life on account of his early training in athletics.

AMERICAN POLO PLAYING RULES.

Ground.

1. The ground should be about 900 feet long by 450 feet wide, with a ten-inch guard from end to end on the sides only.

Goal Posts.

2. The goal posts shall be 24 feet apart, at least ten feet high, and light enough to break if collided with.

Balls and Mallets.

3. The ball shall be of wood, with no other covering than white paint, 3 1-8 inches in diameter, and not exceeding 5 ounces in weight.

Mallets shall be such as are approved by the Committee.

Ponies.

4. The height of ponies shall not exceed 14.2.

Ponies aged five (5) years and upward may be measured and registered for life; ponies under five (5) years may be registered for the current season only. Any member of the Committee may measure ponies not his own and issue certificates of registry. He shall determine the age of the pony. The Committee may by vote appoint one or more official measurers, who shall have all the powers hereby given the Committee in respect to the measurement of ponies and the issue of certificates.

Periods.

5. A. In match games between pairs there shall be two periods of fifteen (15) minutes each actual play.

B. In match games between teams of three (3) there shall be three (3) periods of fifteen (15) minutes each actual play.

Under A and B two (2) minutes shall be allowed after each goal, and intervals of five (5) minutes between periods, unless otherwise agreed.

C. In match games between teams of four (4) there shall be four (4) periods of fifteen (15) minutes each actual play. Two (2) minutes shall be allowed after each goal, and intervals of seven (7) minutes between periods, unless otherwise agreed.

Under A, B, and C, time between goals and delays shall not be counted as actual play.

Eligibility.

6. A member of a club which is a member of the Polo Association shall not play any match games with or against any club which is not a member of the Association, nor shall any player play on the team of any club of which he is not a member, except on written consent of the Committee, and the approval of the captains of the teams entered.

7. A player shall be handicapped with but one club at a time.

8. A player shall not play for the same prize on more than one team or pair.

Any player in his first tournament events shall be handicapped at not less than two goals and shall so continue until changed by the Committee.

Entries.

9. Entries for tournament events shall be made in writing, naming the probable players and substitutes, and be accompanied by an entrance fee of ten (10) dollars for each player, which is to be returned if the team plays, otherwise it is forfeited to the Association. Entries absolutely close on the day announced. No conditional entries shall be received.

The entrance fee for Championship events shall be one hundred (100) dollars for each team.

Drawings.

10. The drawings for all tournaments shall be made under the Bagnall-Wilde system. (This consists of playing a preliminary round to reduce the

number of contesting teams to two, four, eight, or sixteen, thus eliminating the bye at once, and putting all contestants on the same footing.

Uniform.

11. Captains shall not allow members of their teams to appear in the game otherwise than in Club uniform.

Colors.

12. The Polo Association colors are white and dark blue.

Championship.

13. A. There shall be a Senior and a Junior Championship tournament, the latter immediately preceding the former. The Senior Championship shall be open to teams without limit of handicap. The Junior Championship shall be open to teams whose aggregate handicap does not exceed twenty (20) goals, but this limit is simply to define the class, and all games in both classes shall be played without handicap.

No player with a higher handicap than five (5) goals on May 15 shall compete in the Junior Championship.

The handicap governing eligibility to Junior Championship teams shall be that in force May 15 of the year in which the championship events take place.

B. The winner of the Junior Championship events shall have the privilege of making a post entry for the Senior Championship events.

C. Except as provided in Section B a player shall not be allowed to play in both classes.

D. In both classes the Championship may be won by default, but in such case no individual trophies shall be added.

E. In all Championship events, a player shall not represent a club with which he is not handicapped, and a player shall not be handicapped with more than one club at a time. Every player in the Association shall elect with what club he will be handicapped, and the Committee shall be notified in writing prior to the fifteenth day of May in each season.

F. No player shall be eligible to play for his Club in Championship events unless he has played on at least six (6) different days during the current year on the club ground in practice games or in matches.

FIELD RULES.

Field Captain.

1. There shall be a field captain for each team, who shall have the direction of positions and plays of his men. He shall have the sole right to discuss with the Referee questions arising during the game and to enter protests with the Referee, provided that a player fouled may claim the foul. Other players shall testify only when requested by the Referee.

Referee.

2. The two captains shall agree upon a Referee, whose decision shall be final in regard to all questions of actual play, but as regards eligibility of players, handicaps, and interpretation of the General Rules, an appeal may be made by either captain to the Committee, whose decision shall be final.

Disqualification of Ponies.

3. Any pony may be protested on the field under General Rule 4 (if possible, before play begins), by the field captain of the side against which the pony is offered to be played. Unless a certificate of registry under said Rule 4 is then produced the Referee shall forthwith measure the pony and decide the protest. If sustained, the pony shall be ruled off the field for the match.

The Referee shall exclude from the game any dangerous or vicious pony.

Timer and Scorer.

4. The captains shall agree upon a timer and a scorer, who shall perform their duties under the direction of the Referee.

Goal Judges.

5. The home captain shall appoint two goal judges, acceptable to the visiting captain, each of whom shall give testimony to the Referee, at the latter's request, in respect to goals and other plays near his goal, but the referee shall make all decisions.

Substitute.

6. Each team should have a substitute in readiness to play in case of accident or disqualification.

Clear Field.

7. Only players and Referee shall be allowed upon the ground during the progress of the game.

Choice of Ends.

8. The choice of ends shall be determined by the toss of a coin between the field captains.

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Change of Ends.

9. Ends shall be changed after every goal.

Throw-In.

10. The game begins when the ball is thrown in by the Referee between the contestants, who shall each be on his own side of the middle line.

11. After an interval, the Referee shall throw in the ball when the proper signal is given by the timer, whether all the players are lined up or not.

Goal.

12. A goal is made when the ball goes over and clear of the line between the goal posts, or above the top of the goal posts between centre lines.

Safety.

13. Whenever a player, either accidentally or intentionally, gives the ball an impetus with his mallet which carries the ball over the goal line he is defending, and it touches nothing except the goal post or the ground after leaving his mallet, it shall be deemed a safety.

Score.

14. (a) A goal counts one.
(b) A safety counts minus one-quarter.
(c) A foul counts minus one-half.

The side wins which is credited with the largest score at the end of the match.

Time Limit.

15. When the time limit of any period (except the last) expires, the signal shall be given, but the game shall continue until the ball goes out of bounds or a goal is made. Such overtime in any period shall be deducted from the playing time of the succeeding period. When the time limit of the last period is reached, the signal shall be given and the game shall then cease with the ball in its position at the moment of the signal.

16. If a goal is made when any fraction of time remains to be played the game shall continue.

17. When the ball is out of bounds, and the limit of time expires before it is put in play, the period ends.

Tie.

18. In event of a tie at the end of the last period, the game shall continue (after the usual interval between periods) until a goal or safety is made or a foul is penalized.

Out of Bounds.

19. When the ball crosses a side line it is out of bounds, and shall be put in play by the Referee throwing it between the contestants (lined up as at the beginning of the game) toward the middle of the field, and parallel to the goal lines, at the point where it went over the boards. He shall throw from outside the side boards.

Knock-In.

20. When the ball crosses an end line it is out of bounds, and the side defending the goal at that end is entitled to a knock-in, the ball being placed on the line at the point which it crossed, but in no case nearer than ten (10) feet to the goal posts or to the side boards.

21. A ball must be over and clear of the line to be out.

22. When a player having the knock-in causes delay, the Referee may throw a ball on the field and call play. No opponent shall come within fifty (50) feet of the ball, when placed for a knock-in, until the same has been hit by a mallet. As soon as the ball is touched by a mallet after being placed for a knock-in, it is in play, and subject to the rules of play.

Player Substituted.

23. When a player is replaced by a substitute he cannot return to the team the same day, except to take the place of a player who is disabled or disqualified.

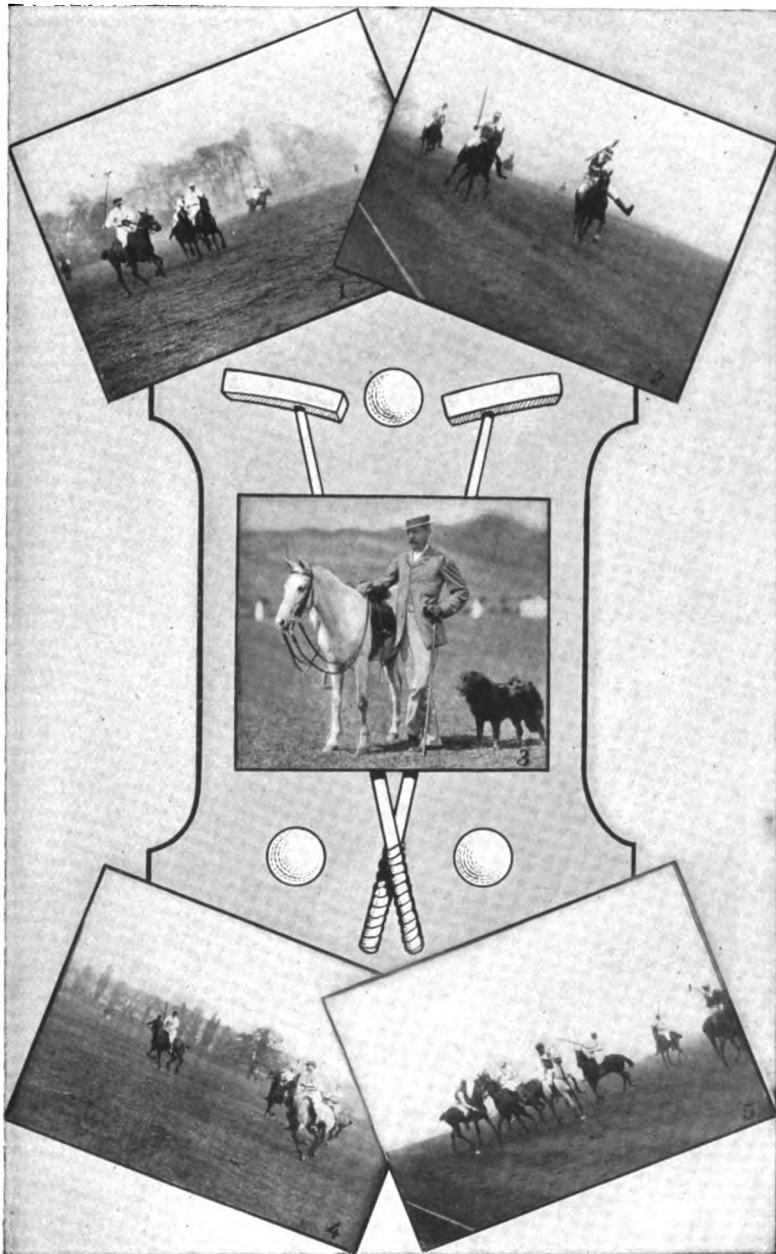
Handicap.

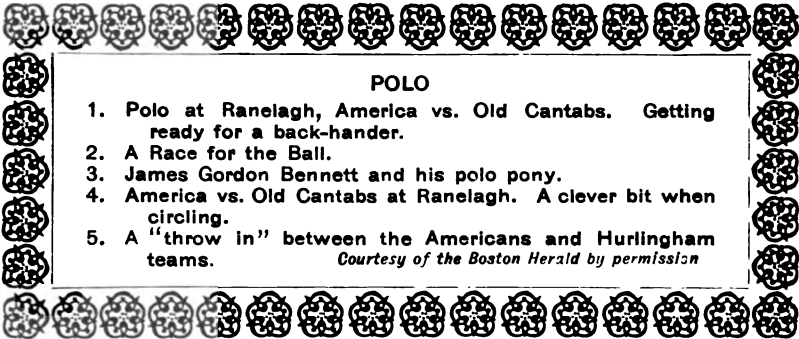
24. When a change of players takes place after the game has begun, the handicap of the man having the highest number of goals shall be counted.

Fouls.

25. The Referee shall declare any violation of Rules 27, 28, 29, and 30 a foul, when seen by him, without waiting to have it claimed; or, when not seen, upon evidence satisfactory to him. He may suspend the player committing the foul for the match, but he shall also allow the usual penalty of one-half goal.

26. In case of repeated or wilful violation of said rules, especially by conduct dangerous to the safety of other players, the Referee shall suspend the player guilty thereof for the match.





POLO

1. Polo at Ranelagh, America vs. Old Cantabs. Getting ready for a back-hander.
2. A Race for the Ball.
3. James Gordon Bennett and his polo pony.
4. America vs. Old Cantabs at Ranelagh. A clever bit when circling.
5. A "throw in" between the Americans and Hurlingham teams.

Courtesy of the Boston Herald by permission

27. In case of a player being disabled by a foul so that he is unable to continue, the side which has been fouled shall have the option, instead of providing a substitute, to designate the player on the opposite side whose handicap is nearest above that of the disabled player, and the former shall thereupon retire from the game. This penalty shall be in addition to those hereinbefore provided, and the game shall continue with each side reduced by the above withdrawals.

Dangerous Riding.

28. Careless or dangerous horsemanship or a lack of consideration for the safety of others is forbidden.

The following are examples of riding prohibited under this rule:

- (a) Bumping at an angle dangerous to a player or to his pony.
- (b) Zigzagging in front of another player riding at a gallop.
- (c) Pulling across or over a pony's forelegs in such a manner as to risk tripping the pony.

Right of Way.

29. A. The right of way is given to the player who has last hit the ball or to the player who has entered safely on the line of the ball between it and the last hitter, or (as against players not in possession of the ball) to the player who is following nearer than any other player the line of direction of the ball.

Crossing.

B. A player shall not cross the player having the right of way, except at an unquestionably safe distance; nor shall he pull up in front of the latter unless he is far enough ahead to give the latter unquestionably enough time to pull up also; nor shall he pull up *across* the latter on any consideration whatsoever.

Meeting.

30. Whenever two players are riding in opposite directions for the ball, each shall leave the ball on his off side.

Other Prohibitions.

31. A. A player shall not strike an adversary or his pony with the hands or mallet, or strike the ball when dismounted.

B. A player shall not interpose his mallet to interfere with an opponent's stroke.

C. A player shall not put his mallet over his adversary's pony either in front or behind.

D. A player shall not seize with the hand, strike or push with the head, hand, arm, or elbow, but a player may push with his shoulder, provided the elbow is kept close to his side.

E. A player requiring a mallet, pony, or assistance from an outside person, during the game shall ride to the end or side lines to procure it. No person shall come on the field to assist him.

F. A player shall not hold the ball in his hand, arm, or lap, nor shall he kick or hit the ball with any part of his person. He may, however, block the ball with any part of his person or with his pony.

Fines.

32. The Referee shall also have the power to impose a fine (the amount to be determined by the Committee) on any team or member of a team failing to appear within reasonable time of the hour named for the events for which they have entered, or for any misconduct or violation of the rules during the progress of the game, and shall report the same in writing to the Committee for enforcement.

Penalty.

33. The Referee may at his discretion award a penalty of half a goal for any violation of Field Rules not covered by Rule 24.

Suspension of Play.

34. A. When a foul is allowed by the Referee, he may or may not stop the game, according to his judgment as to the advantage gained or lost by the foul.

Accident.

B. In case of an accident to a player or to a pony, or to a pony's gear, which in the opinion of the Referee involves danger to a player, he shall stop the game. It shall not be stopped for a broken or lost mallet, stirrup leather, curb chain, or martingale (unless liable to trip a pony).

Broken Ball.

C. When a ball is broken or trodden into the ground in a manner to be unserviceable, in the opinion of the Referee, or when it strikes the Referee or his pony so as in his opinion to affect the game seriously, he shall stop the game, and may substitute another ball by throwing it toward the middle of the field and may substitute another ball at the point where the event occurred.

Change of Ponies.

D. In the case of ten (10) minutes' continuous play, the Referee shall stop

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the game for a change of ponies as soon thereafter as the ball goes out of bounds. Not exceeding two (2) minutes shall be allowed for this purpose.

Other Cause.

E. The Referee may suspend the game for any other reasonable cause.

Time Lost.

F. Time lost under paragraphs *A*, *B*, *C*, *D*, and *E* shall not be counted as actual play.

Referee's Whistle.

35. In all the above cases the play is not suspended until the Referee's whistle blows, but the game shall be considered stopped at the time the event occurred. The ball, when placed again in play, shall be thrown by the Referee toward the middle of the field at the point at which the ball was when the event occasioning the suspension of the game occurred.

Failure to Finish.

36. In the event of a game being stopped by darkness, or for any cause which prevents a finish the same day, it shall be resumed at the point at which it stopped, as to score and position of the ball, at the earliest convenient time, unless settled otherwise by agreement between the captains.

AMERICAN RULES OF WATER POLO.

1. The ball shall be the regulation white rubber Association Football, No. 3, not less than 8 inches nor more than 9 inches in diameter.

2. The goals shall be spaces 4 feet long and 12 inches wide, marked "Goal" in large letters. One shall be placed at either end of the tank, 18 inches above the water line, equally distant from either side.

3. To score a goal the ball must be touched by the ball in the hand of an opposing player, and the greatest number of goals shall count game.

4. The ball shall always be kept on or as near the surface of the water as possible, and shall never be intentionally carried under water. No goal shall be allowed when scored by under-water play.

5. The contesting teams shall consist of six a side, with one reserve man, who can take the place of one of his side in case of disablement only and receive prize if on winning side.

6. Time of play shall be eight (8) minutes actual play each way, and five (5) minutes rest at half time.

7. The captains shall be playing members of teams they represent, and shall toss for choice of ends of tank. The ends shall be changed at half time.

8. The referee shall throw the ball in the centre of the tank, and the start for the ball shall be made only at the sound of the whistle.

9. The ball going out of the tank, it shall be returned to the place it was thrown from, and given to the opposing team.

10. No player is allowed to interfere with an opponent unless such opponent is in actual contact with the ball, or within 4 feet of it.

11. A mark shall be made 4 feet from each goal on the side of the tank and a line drawn across. No player shall come within his opponent's goal line until the ball is put in play within it.

The goal keepers of the side are alone exempt from this rule.

It shall be an off-side play to cross the line ahead of the ball, and it shall be within the power of the referee to decide in such case whether the goal be fairly made or not.

12. Upon a goal being gained, the opposite team shall go to their own end of the tank and the ball shall be thrown by the referee into the centre on play being resumed, but time so occupied shall not be counted as in time of play.

13. Each team shall have two judges, one at each goal line, who, upon goal being made, shall notify the referee, who shall blow a whistle and announce the same. In case the goal judges disagree the referee shall decide whether a goal be fairly made or not.

14. The referee shall decide all fouls, and if, in his opinion, a player commits a foul, he shall caution the team for the first offence, and for the second the player making it shall be ordered out of the water, remaining out until a goal has been scored.

15. The time occupied by disputes shall not be reckoned as in the time of play.

16. When a ball is within the goal line, the goal keepers shall not be allowed any artificial support other than the bottom of the tank.

17. *Fouls*—It shall be a foul to tackle an opponent if he does not hold the ball, or is not within four feet of it. It shall be a foul to hold a player by any part of his costume. Unnecessarily rough play shall, within the discrimination of the referee, be considered a foul. It shall be a foul to push off from ends or sides of tank, or to touch them except for the purpose of resting.

18. In case of a foul: After the team making the foul has been cautioned by the referee, if the same team shall again offend, the referee may punish said team by giving a goal to the opposing side.

19. The officials shall consist of one referee, two timekeepers, four goal judges, and one scorer.

THE GAME OF QUOITS.

QUOIT pitching is one of the most attractive and healthful forms of recreation. Skill is a predominating feature, but to master the game, strength, agility, nerve, and good eyesight are necessary qualifications. In Scotland and in the north of England it is no uncommon thing to see thousands of spectators at a match between players of prominence, in which big stakes are depending on the result, and speculation upon the outcome of the different battles is a special feature.

In America, New York, Brooklyn, Philadelphia, Fall River, Providence, and several other New England cities contain the best facilities for pitching, and the cream of the players in the East, and Pittsburg, Chicago, St. Louis, and Denver in the West.

For the proper display of the beauties of the game a spacious and well regulated ground should be provided. Players should not be cramped, and spectators should receive every opportunity of witnessing the sport with comfort. A championship rink should be about eighty feet long and twenty-five feet wide. There is plenty of space outside of the actual pitching distance to secure the utmost fairness to the contestants.

In addition to the proper arrangement of the ground and ends, it is necessary that a player should have a set of quoits exactly suited to his tastes, a competent director, and a man to look after the condition of his quoits.

An expert is quite particular regarding the construction of his quoits, or "irons," as he terms them. If a set of quoits has been used a number of years, and an accident should befall them and he would be obliged to use another pair, no matter whether they were the exact model of the old ones, he would be apt to make a strong objection, and in nine times out of ten it would impair the value of his play. The quoits most in use among experts are made of malleable iron, oval on top, with a hand clutch made within the ring. Their average weight is from seven to nine pounds each, but players who depend upon their strength principally to carry them through in a game use quoits weighing as heavy as fourteen pounds each. The diameter of an "iron" is generally the bone of contention in making matches, for the more spread the greater space it occupies around the pin. Therefore the diameter is restricted to less than nine inches. Quoits are sold by the pound, the ruling rate for iron prevailing. A well-prepared set of nine-pound "irons" costs from \$2 to \$2.50. They are not easily or often damaged, but the greatest danger of their being rendered useless is by being hit with force by a pitched quoit and split in two or nicked so as to destroy the clutch.

In all important tournaments, in contests for big stakes, or in matches in which experts are involved, sixty-one points constitute the

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game. If the struggle is close the time occupied in finishing the game is between three and four hours. Besides the contestants other persons concerned in a competition are a referee, whose decisions are final; two judges, one for each player; a scorer, and a director. A contestant after delivering his quoit from one end should have nothing to do until called upon to pitch from the other end. It is his judge's duty to denote the position of his quoit at the pin, and if entitled to a point to so claim it. All disputes between the judges are brought to the attention of the referee, and his decision settles matters. When a point is made it is recorded upon a blackboard, which should be in view of almost every person on the ground.

Next to the contestants in point of prominence is a director or "whiter." A man well versed in the intricacies of this position is the life of a competition. His usefulness to the man he directs is shown in many ways. Matches are frequently won and lost by a competent or incompetent director. He should be a man with a good disposition, yet prompt to take advantage of all technical points and see that his player has fair play. It is his duty to station himself at the opposite ends of the rink in use, and by means of a piece of white paper stuck in the clay direct his principal where to place the quoit. Besides this a director should possess the faculty of giving his man constant encouragement and to keep his mind free from the fear of defeat.

The attitude of a man at the mark goes a good way to prove whether he is an experienced quoit pitcher or not. Awkwardness is a great drawback to a person who is ambitious to become an expert, and while he may upon ordinary occasions be able to play a fair game, it would be impossible for him to test his strength with any degree of success against one who combines all the attributes of a skilful pitcher. To deliver a quoit correctly it is necessary to stand erect, with feet close together, the quoit firmly clutched and brought up almost level with the eyes. After gauging the point to be reached, the arm should be thrown well back, and after getting the full swing, stepping out with the left foot, the "iron" should be sent to its destination. The greatest obstacle in the way of a successful pitcher is the lack of courage. No matter how perfect the position may be, or how correctly you may gauge the distance, without courage the quoit is very apt to leave the hand irregularly and land far away from the point aimed at.

RULES FOR QUOITS.

1. The distance shall be eighteen yards.
2. The ends to be of stiff clay, three feet in diameter.
3. An iron or steel pin shall be placed in the centre of the end, with the top flush with the clay.
4. Quoits not to exceed eight and a half inches in diameter, or be less than three and a half inches in the bore, and not to exceed two and a quarter inches in the web.
5. A player must stand within four feet six inches of the centre of the end, at right angles with the rink, when delivering his quoit.
6. A player shall not be allowed to examine the position of his quoit until his opponent has played. He must stand three feet or more behind the end played from until his opponent has delivered his quoit. Players to be allowed to name a person to put up a mark as a guide at the end to which he is about to play.

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7. All measurements to be from centre of the pin. Clay or other matter to be removed, if necessary, to measure nearest part of quoit. All measurements to be made with compasses.

8. All quoits played outside a radius of eighteen inches from the centre of the pin shall be foul.

9. If one or more quoits are lapped, the quoit easiest measured shall be measured and drawn, in order to measure the other or others.

10. Should a quoit be broken during a match the measure must be taken from the nearest portion of the quoit to the pin, and the player shall be privileged to use another pair to finish his game.

11. The use of improper language, or any act perpetrated to disconcert or interrupt the player while in the act of throwing his quoit, is prohibited. The player to have the privilege of throwing his quoit over again in the event of such having taken place.

RACKETS, SQUASH BALL, AND COURT TENNIS.

Rackets.

THE way of playing is as follows:—Three feet and a half from the ground a white chalk line must be drawn along the wall against which the ball is to be struck. Any stroke which sends the ball below this line does not count. Along the ground, in front of the wall, and parallel with the wall, four lines are drawn, forming bases. The two former of these are called the in-hand, the two latter the out-hand bases. The players are either two or four in number; if four, two play in partnership, and either strikes as the ball comes nearest to him, a stroke from either player reckoning for or against his side. We will suppose two competitors on the racket ground. One of them has to guard the in-hand bases, and is called the *in-hand* player; the other the out-hand bases, and is called the *out-hand* player. Each stands in one of his own bases. The one on whom the lot falls to begin strikes the ball against the wall. We will suppose the in-hand player beginning the game. He must strike the ball so that, rebounding from the wall, it falls into one of the *out-hand bases*. If he fail to do this, if the ball strikes the wall below the chalked line, or falls into one of his own bases, or goes over the wall, his adversary counts *one*. If, on the other hand, the ball, rebounding from the wall, comes to the earth in an out-hand base, the out-hand player must strike it back against the wall at the rebound, in such a manner that it shall bound off into an in-hand base; and thus the players go on, each striking the ball in turn against the wall and into his adversary's ground, until one of them fails to strike it, or strikes it under the line, or over the wall, or into one of his own bases, when the other counts *one*. And so the game continues, until one player or one side has gained a certain number of notches, and is declared the winner. The number of notches to a game is usually fixed at fifteen. Some players practise *volleying*; that is, they strike the ball with the racket before it reaches the ground, without waiting for the rebound. This is perplexing to the adversary, as the ball comes into his ground before he expects it. But on various grounds the practice is objectionable.

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RULES ADOPTED BY THE NATIONAL AMATEUR ATHLETIC UNION.

1. The game to be 15 up. At 13 all, the out-players may set to 5; and at 14 all, to 3; provided this be done before another ball is served.
["Set to 5" means that instead of playing the remaining 2 aces of the fifteen, 5 aces are played. "Set to 3," that instead of the remaining one ace 3 are played.]
2. On commencing the game, in a double match, whether odds be given or not, the side going in first to serve shall have but one hand; but in a single match the party receiving odds shall be entitled to them from the beginning.
3. The ball shall be served alternately right and left, beginning on whichever side the server chooses.
4. The server must stand with at least one foot in the "service box," and serve the ball over the line on the front wall and within the proper service-court; otherwise it is a "fault." Serving two faults, missing the ball, or the ball served striking anywhere before it reaches the front wall, is a hand-out.
5. All balls served or played into the galleries, hitting a beam, iron rod, the telltale, or any wood or netting, or above the cement lines of the courts, although they may return to the floor, count against the striker.
6. A ball, to be fair, must be struck before or on the first bound, and must not touch the floor, the galleries, the telltale, or any wood or netting, or above the cemented lines of the courts, before or after reaching the front wall.
7. Until a ball has been touched or bounded twice it may be struck at any number of times.
8. Only the player to whom a ball is served may return it.
9. A ball touching the striker or his partner before the second bound loses a hand or an ace.
10. If a fair ball hit the striker's adversary above or on the knee, it is a "let," and shall be played over; if below the knee, it counts against the striker.
11. The out-players may once only in each game exchange courts to return service.
12. Every player should try to keep out of his adversary's way. When a "hinder" is claimed it shall be decided by the marker.
13. The marker's decision, on all questions referred to him, shall be final. If he is in doubt he should ask advice; and if he cannot decide positively, the ace is to be played over.

Squash Ball.

Squash ball is played in a Racket Court, and is really a variation of the game of Rackets.

DEFINITIONS.

- Ace.*—A point won and scored.
Court.—The whole building in which the game is played. One may speak of the right court or of the left court.
Service Line.—A line painted on the front wall eight feet from the floor.
Telltale.—A line painted on the front wall two feet two inches from the floor.
Dividing Line.—The line on the floor dividing the court into two equal spaces.
Cross-Court Line.—A line across the court twenty-three feet from the back wall.
Hand In.—The player who has the right of serving the ball.
Hand Out.—He who has to receive the service.
In Play.—The ball is in play after being served until it has touched the floor twice, or the player, or the board, or has gone out of court.
Out of Court.—A ball is out of court when it touches the roof, posts, cushions, or is driven into the gallery.
The following Rules of Squash are in general use.

RULES OF THE GAME.

1. The game to be 21 up. At 19 all, the out players may set it to 5; and at 20 all, to 3, provided this is done before another ball is struck.
2. The going in first, whether odds be given or not, to be decided by spin; but one hand only is then to be taken.
3. The ball is to be served alternately right and left, beginning whichever side the server pleases.
4. In serving, the server must have one foot in the space marked off for that purpose. The one player to whom he serves may stand where he pleases, but his partner, and the server's partner must both stand behind the server till the ball is served.
5. The ball must be served above, and not touching the line on the front wall, and it must strike the floor before it bounds, within and not touching the lines enclosing the court on the side opposite to that in which the server stands.
6. A ball served below the line or to the wrong side is a fault, but it may be taken, and then the ace must be played out and counts.
7. In serving, if the ball strikes anywhere before it reaches the front wall, or if it touch the roof or the gallery, it is a hand out.

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8. In serving, if a ball touch the server or his partner before it has bounded twice it is a hand out, whether it was properly served or not.
 9. Two consecutive faults put a hand out.
 10. It is a fault: (a) If the server is not in his proper place; (b) if the ball is not served over the line; (c) if it does not fall in the proper court. The out player may take a fault if he pleases, but if he fails in putting the ball up, it counts against him.
 11. An out-player may not take a ball served to his partner.
 12. The out-players may change their court once only in each game.
 13. If a player designedly stop a ball before the second bound, it counts against him.
 14. If a ball hit the striker's adversary above or on the knee, it is a let; if below the knee, or if it hits the striker's partner or himself, it counts against the striker.
 15. Till a ball has been touched, or has bounded twice, the player or his partner may strike at it as often as they please.
 16. Every player should get out of the way as much as possible. If he can see, the Marker is to decide if it is a let or not.
 17. After the service, a ball going out of the court, or hitting the roof or the gallery, in returning from the front wall, or if it hit the roof before reaching the front wall, counts against the striker.
 18. The Marker's decision is final; but if he has any doubts he should ask advice, and if he cannot decide positively, the ace is to be played over again.
- Different styles of play and players can be suited by some one of the varieties of the game described in the following rules of the game of squash.

RULES FOR THE SINGLE GAME OF SQUASH.

In a four-walled or three-walled court.

There are several sets of rules of squash. The following rules are common to all sets:

1. The game is played with a ball, usually of India rubber, and a racket, usually strung with gut. Hand-fives may be played with a hand-ball, and the naked or gloved hands.
2. The spin of the racket, or of a coin, gives the winner the choice of serving or not serving.
3. The serving player must hit the ball direct on to the front wall, above the service line. If he fails to do so, i. e., if he hits the ball onto the side wall first, or below the service line, one fault is scored. Two faults in succession count as if he had lost the rally.
- N. B.—(1) Some rules count one single fault in this way. (2) Some rules allow out hand player to return the first serve if he likes. If he tries to do so, then no fault is scored.
4. The second player must return the ball on to the front wall, above the telltale, before the ball has bounced twice.
5. The players then continue to return the ball alternately. Whichever player first fails to hit the ball above the telltale before the ball has bounced twice, or whichever player hits the ball on to himself before it has bounced twice, loses the rally.
6. A rally shall also be lost by the player who hits the ball out of court, i. e., above the upper boundary line of the front wall or of either side wall or of the back wall.
- N. B.—(a) If there is a low back wall, a ball that hits above it after bouncing once is scored as a "let" (see below) according to some rules. If there is no back wall, then a ball which goes beyond the back line is "out of court," as in lawn tennis.
- (b) A ball hit on to a line counts as "not up," or as "out," i. e., it counts against the striker.

LETS.

7. If one player (A or B) hits on to the other player (B or A) a ball which would otherwise have gone "up," i. e., above the telltale and not out of court, then the rally shall be played over again.
 8. If one player (say A) obstructs the other player, then this other player (B) may claim a "let," i. e., may claim to play the rally over again, provided that B has not tried to take the ball. If he has tried it, then, except in very extreme cases—B may not claim a "let."
 - N. B.—Much is left to the honor of the players; they are not expected to obstruct on purpose, or to claim "lets" too freely.
- The varieties in the rules depend partly on the serving and partly on the way of counting the winning of the rally.

I. FIRST, OR RACKETS' SCORING.

The game is won by whoever first scores 15 aces.

"Setting."—At 13 all, the loser of the previous point may choose whether he will play the game straight on (e. g., 14-13), or whether he will "set 3" or "set 6." The two latter mean that a new little game will be started to decide the large game, the new little game being for 3 aces or for 5 aces.

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After 14 all, the loser of the previous point may choose whether he will play the game straight on, or whether he will "set 3." He is not allowed to "set 5." The Match is generally for the best 3 out of 5 games, unless arranged otherwise.

Handicaps usually consist of aces, given to the weaker player, who has a start, e. g., of 7 aces, beginning the game at "7-0," or "7-love," instead of "0-0," or "love all."

Service.—A begins serving from whichever side of the court he prefers. Each player may choose his side for his first service.

A must have at least one foot behind the cross-court line; the other foot may be on the line or behind the line.

A serves direct on to the front wall and above the service line, and hence into the opposite side of the court.

(i) In Rackets the service must pitch (first bounce) into the back sections.
(ii) In Squash the service may often pitch (first bounce) into the front sections.

Players must arrange beforehand as to which method they will adopt, as the difference between (i) and (ii) is considerable.

After A has scored, B tries to return the ball, before it has bounced twice, above the telltale, but not on to or above the boundary lines; then A tries to return it, and so on, till either A or B loses the rally (see above).

If A, the server, wins the rally, then he scores one ace ("1-0," or "1-love"). If B, the non-server, wins the rally, then he goes in to serve; and if B, the server, wins the next rally, then he scores one ace; and so on, till one player reaches 15 aces.

II. SECOND SCORING, OR RACKETS' SCORING REVERSED.

The rules here are exactly the same, up to where A has served, and the first rally is won and lost.

If A wins it, then A, the server, does not score an ace—a server can never score an ace—but B now serves.

If A wins again, then A scores an ace ("1-0," or "1-love"). B goes on serving until he wins a rally; then A serves, and B has a chance of scoring an ace.

III. THIRD SCORING, OR THE EQUAL SERVICES GAME.

This scoring was invented by Mr. Eustace H. Miles.

In this way of scoring, every rally which is won counts as an ace to the winner.

A serves two services, one from each side of the court, according to either set of rules.

Then B serves two services, similarly; and so on, the players serving alternately until one of them has scored 15 aces.

N. B.—The first server, if Rule I (i) is chosen, i. e., if the service is to pitch (first bounce) into one of the back sections of the court, should only be allowed one service.

IV. FOURTH, OR LAWN TENNIS SCORING.

A serves for one game, scoring as in lawn tennis, except that it is better to have "vantage all" and then a single point to decide the game, than to have "deuce," "vantage," "deuce," "vantage," indefinitely.

B serves for the next game; and so on, until either A or B has scored the set of 6 games.

If "5 games all" is reached, it may be better to play "deuce and vantage games," but to have "vantage all" if the players score 6 games all, and then to let a single game decide the set.

Court Tennis.

King Charles II., playing tennis with a dignified cleric who made a good stroke, exclaimed, "Not a bad stroke for a *dean*!" "I will give it the stroke of a *bishop* if your majesty pleases," was the rejoinder.

Tennis played indoors in a court or room. The court nearly fills an entire building, which is lighted from the roof.

The playing space is 96 by 32 feet, and is surrounded on three sides by a corridor about 6 feet wide, called the Penthouse, with a sloping roof about 7 feet high. The part of the Penthouse at the rear of the court is called the Dedans, and is occupied by spectators. It is separated from the court by an open grating, while the rest of the Penthouse is closed, except for spaces through which the court is entered, and for six small square windows—three in each court. The floor of the court is of smooth asphalt, and the walls are covered with cement and painted black to the height of 18 feet. Across the middle of the court is stretched a net; the space on one side of it is called the Service side, that on the other the Hazard side. On that wall of the Hazard court there is a projection like a chimney, called the Tam-

four, and in the Penthouse near it, there is a square opening called the Grille. Part of the courts is divided into spaces called Chases, numbered on the wall from 1 to 6. The server stands in the Service court and serves the ball on the wall over the Penthouse. The ball must strike on the Penthouse roof, and then roll off into the receiving court. The player in the Hazard court strikes it on the bound where he likes, so long as it first strikes the ground on the opposite side of the net. Thus, he may strike it against the nearest wall so that it bounds back across the net.

The scoring is as in Lawn Tennis, except that the server may win a point by sending the ball into a "winning opening"—that is, the Grille, or the window in the Penthouse nearest the end wall.

SAILING.

DEFINITIONS AND INSTRUCTIONS.

All sailing vessels are set down under the term ships, but, strictly speaking, a *Ship* is a vessel with three masts that are square-rigged; that is, the yards which support the square-sails are rigged at right angles to the masts. But all the sails are not square, the jib being triangular, and the spanker bowsided, but not square. The *hull* or body of the vessel is divided into the *fore-castle*, before the foremast, the *waist*, between the foremast and mainmast, and the *quarter-deck*, which is *abaft* or behind the miszen-mast. These masts are fitted with other masts, slipping into each other, and securely connected for the purpose of bearing its appropriate sail. Thus, the foremast or forward one is the *foremast*, and bears the *foresail*; the mast above that is the *foretopmast*, and bears the *foretopsail*; the one above that the *foretop-gallant-mast*, and bears the *foretop-gallant-sail*. The mainmast is divided in the same way into mainmast, maintopmast, and maintop-gallant-mast, which bear severally the mainsail, maintopsail, and maintop-gallant-sail. The miszen-mast is furnished with a sail rigged on the plane of the vessel's length, or "fore and aft"; and the bowsprit or jib-boom, which projects from the front at more or less of an angle, supports with the foremast a triangular sail called the *jib*, also rigged fore and aft; and has another mast attached to it, called the flying-jib-boom, which supports the flying-jib. There are usually square sails above the top-gallant-sails, that are called "royals," and distinguished by the names of the masts to which they are attached. Then there are additional sails, projecting on either side of the square-sails, that are used in light winds, called *studding-sails*, and the *booms*, which support them, are attached to the extremities of the several yards. Between the masts are also triangular sails, called *stay-sails*.

A *Brig* is rigged on the same principle as the ship, but has only two masts; being a ship, as it were, with the mainmast taken out.

A *Schooner* is a vessel with two masts, rigged fore and aft. She may carry gaff-topsails, which are triangular sails, set above the main- and fore-sails, or one or two square topsails before. In the last case she is usually called a "topsail schooner." A schooner has sometimes three masts, and is known as a *three-masted schooner*, or as a *ship-rigged fore and aft*.

A *Brigantine* is a schooner, with square sails on the foremast, foretopmast, and foretop-gallant-masts; being a topsail schooner, with the addition of a foresail.

An *Hermaphrodite Brig*, vulgarly called a "*morfydite*," is brig-rigged fore, and schooner-rigged aft. It is almost peculiar to this country.

A *Sloop* is a vessel with one mast, and the sails, which consist of a mainsail, jib, and gaff-topsail, rigged in the plane of its length. The North River sloops are celebrated for their fast sailing.

The *Yawl* is sloop-rigged with a mainsail so short that the boom leaves room for a small mast, called a jigger-mast, back of the stern-post, which carries another sail, called a jigger. It is a very handy rig, as sail can be easily shortened if the wind blows hard, either by taking in the mainsail or sailing under the jib and jigger alone, or taking in the two latter and using the mainsail alone.

The *Sharpie* is a long flat-bottomed sailboat built very sharp in the bow, fitted with a centreboard and leg-o'-mutton or sprit sail, that is a sail extended by a sprit, and very useful in shallow water. It is often built with cabins and decks like other yachts.

The *Cat-Boat* has one mast and sail, like a sloop without a jib. The forward part is decked over and the mast is set close to the stem. Cat-boats are generally built wide and shallow and are fitted with a centreboard. They are sometimes large enough to have a cabin forward.

Characters of a Yacht.

Speed, safety, and accommodation are the three first qualities of a yacht. She ought to be pleasing to the eye when afloat, of such a breadth as to carry

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her canvas with ease, and at the same time so sharp in her bow and well shaped astern as to displace her weight of water smoothly and gradually, while she leaves it in the same way.

Various Kinds of Yachts.

Yachts are of various kinds, according to their size. If more than eighty tons burden, the schooner is most suitable; for, as the spars are more numerous, they are proportionally lighter. The schooner, as has been before observed, has two masts—the foremast and mainmast; the one bearing the sail called the boom-foresail, and the other a mainsail. She has two or more head-sails, called stay-sail, forestay-sail, and jib. Her topsails are either square or fore and aft.

The *Cutter* has one mast and four sails—viz.: mainsail, maintopsail, foresail, and jib. Some smaller craft have larger jibs, and no foresail.

The *Dandy-rigged Yacht* differs from a cutter, in having no boom for her mainsail, which can consequently be brailled up by a rope passing round it. She has a mizzen-mast standing in the stern, which sets a sail called a mizzen, and which is stretched on a horizontal spar, projecting over the stern. This style of rig is more safe for a yacht, as the boom in ordinary cutters is liable to sweep persons overboard; and the sail can be taken in quicker by brailing it up than by lowering it down.

The *Hatteen* has only two sails, a fore and main sail, of a triangular shape. Each has a spar standing from the deck to the peak of the sail, and a boom at the bottom, like a cutter. This rig, from setting more canvas abaft, is well adapted for narrow waters.

To Sail a Boat.

Getting into his little boat, the beginner, who should have a skilled grown person with him as companion, will soon learn the principles on which a boat *tacks* or is *put about*, how to *hike* safely, how to *reef* the mainsail and the foresail and how to fit a *reefed snifter*, how to *stow the sail* and *moor the boat*, and how to *pick up moorings* and to *come alongside*. Sailing boats are usually made fast by a chain to a stone under water; when the boat gets *under way*, the chain is let go, and is picked up again by a rope, one end of which is made fast to the chain, the other to a piece of wood or small cask called a *buoy*. To pick up this buoy again, sometimes the sails are lowered and the boat runs at it, but usually the boat is taken to leeward, and at the proper distance is *luffed up*, so as to come head to wind, and stop as nearly as may be over the buoy; and to do this with certainty requires much practice. The beginner should go where he has plenty of room, taking out a buoy or piece of wood, and practise picking that up till he can measure his distance pretty accurately. To do this, however, and in fact to sail a boat at all, a clear understanding of the principles of sailing is of great assistance.

Everybody can understand how a boat can sail *before the wind*—a box for a boat, with a coat or umbrella for a sail, can do that, but to sail with the wind on the side, or to make way against the wind, is far more difficult; in fact, persons not accustomed to it often doubt the possibility of doing so. In explaining this, we will consider the sails as quite flat, for the nearer they can be brought to flatness the better, and wherever they are not flat there is a loss. Supposing the sails, then, to be flat, and the wind to strike them, part of the force is lost (as will be understood on mechanical principles), part of it presses against the flat surface of the sail, and perpendicularly to it. This tends partly to drive the boat *ahead*, partly to drive the boat *bodily to leeward*, and if the boat was a box or tub, she would go in a direction between the two; but as boats are usually constructed, they are sharp at the fore-end, and the surface opposed in that direction is not more than one-seventh of the surface which the nearly flat side opposes—hence the boat is driven easily ahead, but only a little or not at all to leeward; and boats are constructed so as to oppose as little resistance ahead and as much on the side as possible. Any boat will sail with the wind astern, and most boats will sail with the wind on the quarter—i. e., blowing in any direction between the stern and the broadside; but only good boats will sail with the wind on the bow or before the beam, and then not when the wind is more than *four points* before the beam, reckoning by the thirty-two points of the compass, and to do that, the sails must be well set, and the boat pretty good. To explain how this is effected, let us suppose a boat with her head pointing exactly toward the wind, then her sails will only flap about and tend to drive her astern. Now suppose her bow gradually turned away from the wind; if the sails are hauled pretty flat, after a time, usually when her bow is four points or the eighth of a circle off from the wind, the sails will fill with wind, and, on the principles already explained, she will move ahead. And it is obvious that, after having gone some distance in this direction, she may be put about and go at a similar angle to the wind in the other direction, and will thus have advanced against the wind, or towards the quarter from which the wind is blowing. This is called *tacking* or *turning to windward*, and to do this well is the greatest proof of a good boat or of good sailing. In *sailing to windward*, the sails are trimmed or hauled aft to an angle which varies for each boat, and must be found by experience; they should be kept just full of wind—if empty they are doing no good, or even harm; if too full, the boat is *off her course*, and not doing her best to windward. A rough rule is to keep the

flag or vane just over the mainsail. Boats ought always to carry a weather helm — i. e., the bow should have a tendency to turn toward the wind. Putting weight in the bow makes the weather helm stronger, putting it in the stern or increasing the head sails has the reverse effect. When the wind is on the *starboard* or right-hand side of the vessel, she is said to be on the *starboard tack*; when the wind is on the *port*, *larboard*, or left side, she is said to be on the *port tack*; and when vessels meet, that which is on the starboard tack either keeps straight or luffs, that which is on the port tack gives way and passes to leeward.

To sail with the wind on the bows the boat must have a keel. In a sail-boat this is generally made movable, sliding up and down, within a well in the centre, and is sometimes called the *sliding-keel*, but more generally the *centre-board*. A skiff may be made to tack by holding the flat blade of a skull deep in the water, against the side of the boat, on the leeward side; but this is inconvenient.

While engaged in learning how to manage a boat it is as well to get an old sailor to teach you how to make the various knots, splices, and hitches for which you will have constant occasion.

Cautions and Directions.

1. Never leave anything in the gangway, and keep the decks clear.
 2. Coil up all ropes; and have a place for everything, and everything in its place.
 3. Take care that in tacking or jibing the boom does not knock you overboard.
 4. Stand clear of ropes' ends and blocks flying about, when you are tacking, and the sails shaking.
 5. Keep a good lookout ahead, and also for squalls, which may generally be observed to windward.
 6. Always obey the orders of the steersman promptly.
 7. Keep all your standing rigging taut.
 8. When the boat is on the wind, sit on the weather side.
 9. Should the boat capsize, keep yourself clear of the rigging and swim ashore.
- The young yachtsman should on no account attempt to take command of a boat till he is thoroughly experienced, and should never go in one without having at least one experienced hand on board; he should always have his eyes open to what is going on, and be ever ready to lend assistance with the greatest promptitude.

Nautical Terms.

Haul, to pull.
Taut, tight.
Starboard, to the right.
Port (Larboard), to the left.
Close-hauled; or, *on the wind*; or, *flying to windward*, steering close to the wind. Cutters have good way within five points of the wind; square-rigged vessels not within six.
Wind on the beam; or, *sailing free*, sailing with the wind across the waist of the vessel; her head is then eight points from the wind.
Before the wind, sailing with the wind right aft, or behind you, that is with the head sixteen points from the wind.
Sailing with the wind abaft the beam, sailing with the head of the vessel more than eight points from the wind, but not sixteen.
Sailing with the wind before the beam, with the vessel's head less than eight points from the wind, but not close-hauled.
Luff, keep nearer the wind; keep your luff, means, keep close to the wind.
Belay, make fast.
Steady, keep the helm amidships.
Haul aft, more toward the stern.
Put the helm down, put the helm to leeward.
Put the helm up, bring it to windward.
Leeward, the point to which the wind blows.
Windward, the point from which the wind blows.
Ship the tiller, fix it in the rudder head.
Unship, means, of course, exactly the reverse of the above.
Jibe, the act of bringing over the sail from one side of the vessel to the other.
Bend the sail, fix it in its proper place.
Booze the sail well up, put it strongly into its place.
The throat of a mainsail (a fore and aft sail) is that part of a sail which is fixed to the gaff, close to the mast.
The Peak is that part of a sail which is fixed to the end of the gaff, which is away from the mast.
The Gaff is a spar with a forked end, which is at the top of the fore and aft sail.
The Boom is a spar which is at the bottom of a fore and aft sail.
Head-sails, any sails at the head of a vessel; in cutters, foresail, forestay-sail, jib, and any other she may carry before the mast, except a squaresail, which is sometimes used for running before the wind.
Fore and aft sails, such sails as the mainsail of a cutter when stretched fore and aft, by its sheets.
Sheets, the ropes by which the lower sails are made fast in the position desired; we say, for instance, "Haul taut the foresheet," which means, tighten the

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foresheet. Each sheet is distinguished by the name of the sail to which it is attached; for instance, the mainsheet means the sheet belonging to the mainsail; in like manner, jibsheet, foresheet, etc. The jib, however, has two sheets, one on each side of the forestay, for the convenience of tacking; the foresail has but one, which is made fast to the traveller of the foresheet horse; as the boat tacks, the traveller enables the foresail to pass from one side of the boat to the other.

Foresheet horse, a bar of iron which crosses from one gunwale to the other, to which the foresheet is fastened by means of a traveller; it is an inch or two above the deck.

Traveller, in the case of the foresheet horse, is the ring that passes backward and forward along the foresheet horse, as the foresail is jibed from one side to the other. Speaking generally, the term means an easy ring attached to a sail, and running upon a boom bowsprit or mast, to enable you to haul out or haul up a sail.

Yards, the sticks by which square-sails are set.

Square-sails, such sails as the main-top-sail of a brig.

Tack, to turn a vessel from one side to the other, with her head toward the wind. When a vessel is obliged to tack several times to get to windward, we say she is beating to windward; when she is tacking to get up or down a channel, we say she is beating up or down;—by the by, in rough weather she often gets a beating in the attempt; when tacking to get off a lee shore, we say she is clawing off.

Halliards, the rope by which signals or sails are hoisted. We say, for instance, "haul taut the peak halliards," which is an order to hoist the peak of the sail well up.

Lee runner and tackle, a substitute for a backstay; used in cutters, on account of its being easily removed when going before the wind.

Stays; in tacking, the vessel is said to be in stays from the time the jib-sheet is let fly until the foresail draws.

Bobstay, the rope fixed at the end of the bowsprit, and fastened about half way down the stem. Chains are frequently used for this purpose.

Backstays, forestays, etc., etc.; each of these denote the particular part the rope supports. The former are ropes from the after part of the head of the topmast of a cutter-rigged vessel to the after part of the chains on each side of the ship; the latter is a rope from the topmast-head to the farther part of the bowsprit; it there passes through a block and comes in by the stem-head, and is then made fast to its cleat.

Cleat, a projecting piece of wood or iron, to which sheets or halliards are made fast.

Shrouds are also supports to the masts. Each shroud is distinguished by the part it is intended to support—for instance, the bowsprit and main-shrouds.

Boom-guy, a small tackle, one end of which is hooked to the main-boom, and the other forward, to prevent the boom from swinging.

Topping-lift, strong ropes, which are near the end of the main-boom, and led through blocks on each side of the mast, just under the cross-trees, from whence it descends about half way, and is connected with the gunwale or deck by a tackle.

Bow-line, a rope made fast to the foremost shroud, and passed through a thimble in the after lurch of the fore-sail, then round the shroud again, and round the sheet.

Thimble, a small ring, of iron or brass, inserted into the sails.

Cringles, short loops of rope, with a thimble inside them, and spliced to the lurch of the sail.

Gaskets, ropes made by plaiting rope-yarns.

Slack; take in the slack; draw in the loose rope.

Lanyard, a small rope.

Reef; taking in a reef, is tying in a portion of the sail.

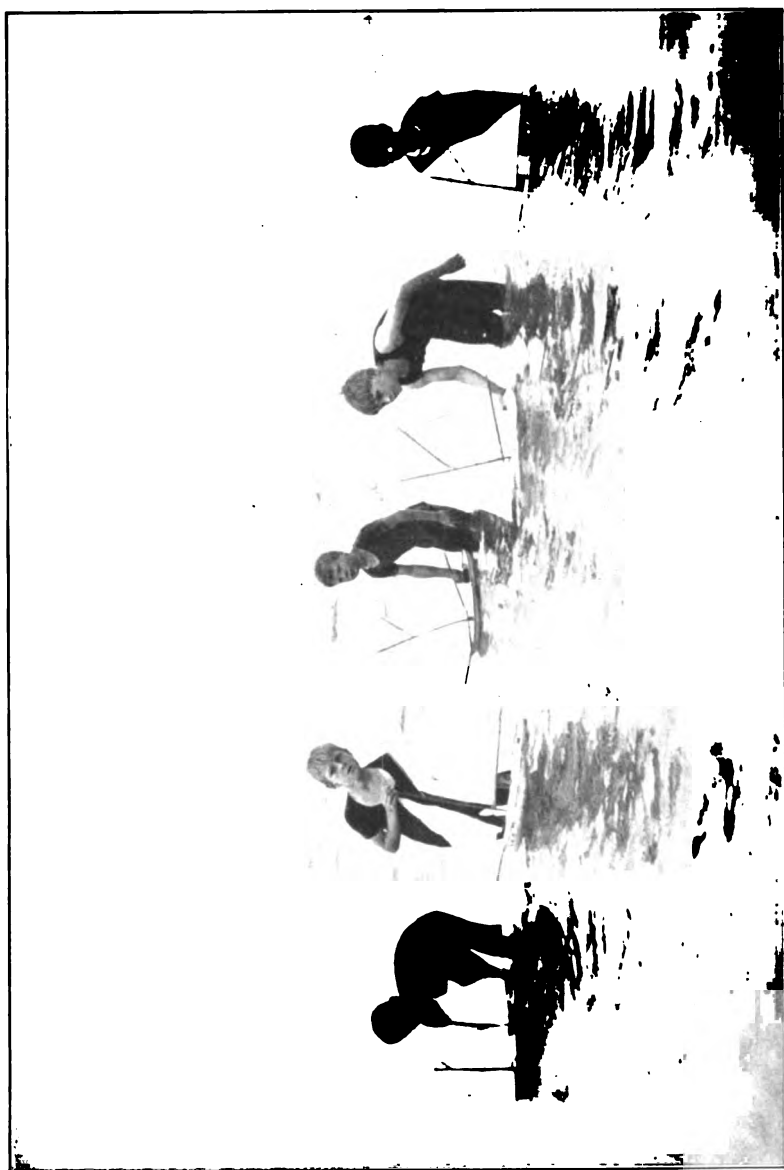
Reef-tackle, a small tackle formed by two hook-blocks, one of which is hooked to the under part of the boom, about one-third of its length from the mast; and the other, farther aft. The fall is belayed to a cleat under the boom.

Earing, a short rope used in reefing, one end of which is made fast to the boom, at the same distance from the mast as the cringle, to which it belongs; it ascends and passes through the cringle, then descends and passes through a sheave on the side of the boom; then it is passed on board and stopped to the boom by means of its lanyard, or small line spliced into its end for the purpose; this lanyard is also to make it fast when the sail is reefed and the tackle removed.

Bowsprit fid, a bolt of iron that passes through the bowsprit bits and the heel of the bowsprit, to keep the bowsprit in its place.

Bowsprit bits, two stout pieces of wood, between which the bowsprit passes. If the reader has noticed the way a carriage-pole is fixed, he will readily conceive how the bowsprit is fastened between the bits.

Channels, the places on the side of the vessel to which the shrouds are fastened.



MODEL YACHT RACING
(FROM A PHOTOGRAPH)

Here is a group of our future admirals all intent upon sailing their model yachts, which are evidently not "sonceer class", for there is quite a variety of rig. Model yacht sailing is one of the oldest of sports, and is a favorite one—from the prince whose costly toy ships are bought for him to the boy who gets much more fun out of the game by making his own vessel. These boys are of the right sort, for they look capable not only of sailing but of making their own boats.

The quarter of a vessel, is the place on either side at which the side and the stem meet.

Midships, midway between the sides of the vessel.

Abeam, at right angles with the keel of the vessel. The term has risen from the beams of the vessel lying that way.

Cast her; in first making sail, it means placing the head of the vessel in the most advantageous position.

Wear to; come round on the other side of the wind, without backing.

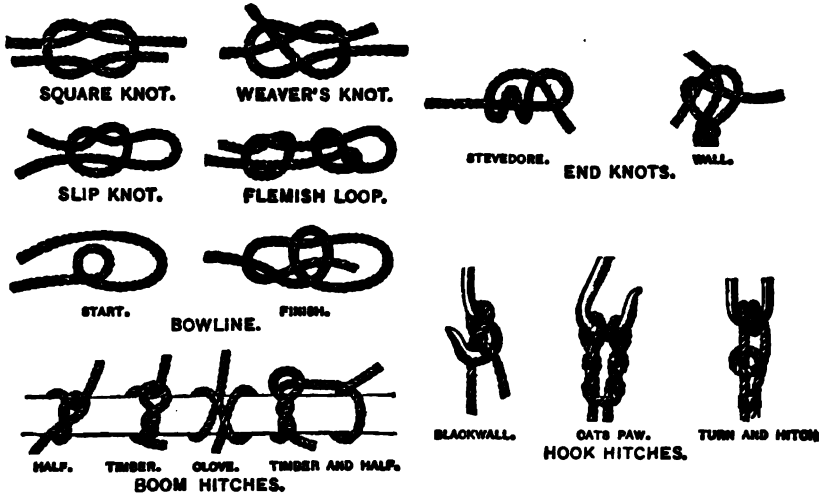
Helm's-a-lee, the call of the helmsman when his helm is hard down in tacking.

Ready about, a command for all hands to be ready in tacking.

SAILING RULES.

1. Boats on the port tack must keep clear of those sailing on the starboard tack. In all cases of doubt the boat on the port tack must give way.
2. Boats sailing before the wind must give way to those going on either tack.
3. In case two boats are sailing before the wind, the one having the wind on the port side must keep out of the other's way. (The side on which the boom is settles the question as to direction of wind.)
4. If both have the wind on the port side, the windwardmost must give way. But in any event the overtaking boat must keep clear of the one it is overtaking.
5. If two boats meet, both must put their helms to port.
6. In a race, if two boats approach a shore or buoy, and the one to leeward has not room to tack so as to clear the other, and yet would be in danger by keeping on her course, she must hail the other, which must tack at once. The leeward boat must tack as soon as there is room to do so.

KNOTS AND HITCHES.



The square knot is used for small ropes and cord. Tie it as shown, both ends passing outside together, or it may slip.

The weaver's knot or becket-bend is the best and quickest way to unite the ends of string or cord. It is also a good knot for ropes.

The bowline is the best knot for making fast to a post or ring. It will never slip and is easy to loosen.

Hitches are used in lifting lumber, logs, etc., and in making fast to hooks. The "timber and half hitch" is especially safe.

End knots are used to prevent a rope being drawn through a hole.

Cleat Hitches.

To make fast to a cleat, hauling on the rope with the right hand uppermost, pass the rope to the right side of the cleat, under the lower horn, over the upper horn, again (from right to left) under the lower horn, press the rope against the lower left side of the cleat with the thumb of the left hand to prevent its slipping, form a loop in the rope with the right hand, the rope crossing the cleat from left to right, drop this loop over the top horn, and pull tight. If this has been properly done the rope will cross the cleat from the lower left to the

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upper right corner, and bind down the loose end of the rope to the front of the cleat.

To loop up the loose rope neatly, pass the rope to the left hand (held two or three feet from the cleat) and over the upper horn until all but about four feet is looped up, wind the loose end around the hank thus formed downward, and pull the end through the hank at the bottom to fasten.

Yachting on the Ice.

Ice yachts are shaped like a triangle, and slide over the ice on runners like skates. They are generally cat-rigged or sloop-rigged, but sometimes with shear or double masts and a lateen sail, like one kind of catamaran. Ice yachts will sail very fast, sometimes more than a mile a minute.

Ice yachting is one of the most popular of sports in the Northern States and Canada, and especially on the Hudson River.

SAILING RULES OF THE HUDSON RIVER ICE YACHT CLUB.

RULE 1.—The following sailing rules and regulations shall govern and control all the regattas and all the races of this Club, and all contests sailed under its auspices, unless otherwise specified between parties making a match.

RULE 2.—*Classification.* Yachts shall be divided by sail area into four classes as follows: First class, measuring 800 square feet of sail area and over; Second class, measuring 450 and under 600 square feet; Third class, measuring 300 square feet and under 450; Fourth class, measuring less than 300.

RULE 3.—*Objections.* If any objection be made with regard to the starting of any ice-yacht in a race, such objection must be made in writing to the Regatta Committee at least one hour before a regatta.

RULE 4.—*Entry of the Yachts.* Unmeasured or unrecorded yachts, or yachts in arrears to this Club, cannot be entered for any race.

RULE 5.—*Touching Buoys, etc.* An ice-yacht touching any mark, boat, or buoy, used to mark out the course, shall forfeit all claim to the prize, except as in cases specified in Rules 7, 9, 10.

RULE 6.—*Rule of the Road.* When two yachts have to cross each other on the opposite tacks, the one on the starboard must invariably keep her course, and the one on the port tack must keep away and pass to leeward, or tack short, when the smallest doubt exists as to her being able to weather the other. All expenses of damages incurred by yachts on opposite tacks running on board each other, fall upon the one on the port tack, unless the one on the starboard tack has kept away with the intention of passing to leeward, in which case the expense of damage falls upon the yacht on the starboard tack, because, by her keeping away, she may have prevented the other passing to leeward. Should a vessel on the port tack attempt to weather one on the starboard tack when it does not seem possible to do so, the latter, rather than keep away, should put her helm down. Nothing should induce a vessel on the starboard tack to keep away.

RULE 7.—*Courses.* Any ice-yacht purposely bearing away or altering her course to leeward, and thereby compelling another ice-yacht to bear away to avoid a collision, shall forfeit all claim to the prize, and pay all damages that may ensue—unless, when two ice-yachts are approaching the windward shore, a buoy or stake boat, together with a free wind, and so close together that the weathermost cannot bear away clear of the leewardmost, and by standing further on would be in danger of running on shore, or touching a buoy or stake boat; then such leewardmost ice-yacht, on being requested to bear away, is immediately to comply, and will forfeit all claim to the prize by not doing so. The weathermost ice-yacht must, however, bear away as soon as the one she hails, if she can do so without coming into contact.

RULE 8.—*Rounding Buoys, etc.* When rounding a mark, boat, or buoy, the ice-yacht nearest thereto is to be considered the headmost ice-yacht; and should any other ice-yacht in the race compel the ice-yacht which is nearest to any mark, boat, or buoy, to touch said mark, boat, or buoy, the ice-yacht so compelling her shall forfeit all claim to the prize; her owner shall pay for all damages that may occur; and the ice-yacht so compelled to touch a mark, boat, or buoy, shall not suffer any penalty for such contact.

RULE 9.—*Courses.* Ice-yachts going free must invariably give way for those by the wind on either tack.

RULE 10.—*Courses.* When two ice-yachts (by the wind) are approaching the shore, a mark, boat, or buoy, together, and so close to each other that the leewardmost cannot tack clear of the weathermost, and by standing further on would be in danger of running on shore, or touching a mark, boat, or buoy; such weathermost ice-yacht, on being requested to put about, is immediately to comply,

and will forfeit all claim to a prize by not doing so. The leewardmost ice-yacht must, however, tack at the same time as the one she hails, if she can do so without coming into contact.

RULE 11.—*Pushing.* Unfair pushing is strictly forbidden in any race for a prize; any ice-yacht infringing upon this Rule, in the opinion of the Regatta Committee, shall forfeit all claim to the prize.

RULE 12.—*Ballast.* No ice-yacht shall increase or diminish ballast during a race.

RULE 13.—*Time of Performance.* SECTION 1. In case the distance assigned for the race shall not have been performed in the time specified by the Regatta Committee, the race shall be repeated at such time as the Regatta Committee may appoint.

SEC. 2. If any ice-yacht, however, shall perform the distance in time specified for her class, it shall be deemed a race for that class.

SKATING.

BY

ARTHUR G. KEANE, M. D.

SKATING is one of the earliest of sports and it is one of which no one country or nation can claim a monopoly, for any climate sufficiently severe to form ice will turn out its share of people to indulge in this prince of winter pastimes, and even in countries in which ice rarely or never forms, artificial ice rinks are made upon which lovers of the graceful art may disport themselves. About 1905 artificial ice rinks became fashionable in Melbourne and other cities in Australia—and some of the most gorgeous fêtes, carnivals, and competitions there given have rivalled those of the Canadians themselves.

Few there are who are unable to enjoy its pleasures, for it is only those who are the victims of some physical disability who need be debarred from participating in this health-giving exercise.

Its history dates back for centuries, the people of the far North of Europe being probably the first to take advantage of the ice's slippery surface.

The skating implements of that age were of the most primitive form, being made of the bones of the various domestic animals. Those most frequently used were the metacarpal bones of the horse, ass, and ox. These were ground down and fastened to the feet by means of thongs passed through holes drilled in the bones for that purpose.

As can easily be imagined, it would be almost impossible to strike out on skates of this kind, and most historians unite in claiming that they were used merely as runners while the skater propelled himself by means of a spiked stick.

These skates have been found in Holland, Denmark, North Germany, and Switzerland. It is claimed that this same style is still in use in Iceland, and the British Museum now owns an Icelandic pair made from the metacarpals of the cow.

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Since that time the skate has gone through many stages of improvement. The first blade skate was probably made some time in the fifteenth century, although some claim as early as the twelfth. Whichever is correct, it is certain that the first authentic description and picture date back to the fifteenth century. On the fiords of Scandinavia, in the fens of Lincolnshire, England, and on the large rivers and lakes of North America, the running or fen style, which is simply going straight ahead at the highest possible speed, is the favorite method; and in Holland, Denmark, and other places, large winter market traffic is carried on on skates. There the children go to and from school on skates, the housewives go shopping on skates, and skating is the chief means of progression from place to place during many months of the year. The streets of many of the cities being really canals, and the low-lying land being frequently covered with water, there are opportunities for skating such as exist almost nowhere else, and pretty and animated are the scenes which enliven the winter months, when fairs are held on the ice and the canals are illuminated for miles.

The modern skate is made entirely of metal, and of three general styles: racing, hockey, and the figure skate.

The racing pattern is usually made of aluminum, tubular in shape so as to lessen the weight, and the bottom of the blade is perfectly straight except for a very slight turn-up at the tip. The object of the straight blade is to provide for a better purchase on the ice, so that more power may be applied at every stroke than if it had a bearing surface of only two or three inches. The length of the blade varies from about fourteen to seventeen inches, the shorter being intended for use on a circular track and the longer for straight-away skating. Without a rear wind, the fastest skating time has been made in New York as well as the best running high jump on skates and the best running long jump.

The hockey skate resembles the racing variety in that it also has a straight blade, but the blade is wider and the whole skate is heavier in construction in order to stand the strain of the frequent startings and stoppings which are necessary in this game. The length of the blade varies with the size of the foot and is usually several inches longer than the shoe.

The figure skate is of many varieties, and is either screwed or clamped to the shoe. The up-to-date skate in this country is made of all steel, quite light in construction, and the bottom of the blade is the true arc of a circle. It has what is called a diamond-point, that is, the tip of the blade has a very sharp point, the object of which is to keep the skate from slipping on the ice when doing toe-spins, etc. In this skate also the length of the skate depends on the size of the foot. It should be of sufficient length to allow the blade to overhang the heel a little more than a quarter of an inch, and the tip to extend to a line dropped from the end of the sole. A mistake fre-

quently made is to have the tip of the skate project beyond the toe of the shoe. The best width of blade is $15\frac{1}{64}$ of an inch.

There has been a wonderful advance in the skating ability of the general public in the last decade, especially that portion residing in the larger cities. This improvement is partly due to men and women alike who are now indulging in the numerous branches of outdoor exercise, but can be more especially attributed to the better facilities offered by the presence, in many of the cities, of rinks of artificial ice. Rinks of this character were introduced in New York in the winter of 1895, and there has been a perceptible advancement in skating ability from year to year since that time.

The game of ice-polo, which was scarcely more than the old-fashioned game of shinny, was introduced in the winter of 1895-1896, but was short-lived, being superseded by the more exciting and far more scientific game of hockey, which was brought to us across the border by our Canadian cousins.*

The New England colleges also recognized the merits of the game and were not slow to adopt it. Other colleges soon followed their example, and the result is the Intercollegiate Hockey Association. As in all other sports, the preparatory schools throughout the country followed the lead of the larger institutions of learning, and some of the most exciting contests of the season are those of the Interscholastic League.

While hockey and speed skating have their horde of followers, figure-skating, improperly called fancy-skating, is equally deserving of its place when treating of this glorious winter pastime. It has been truly termed "The Poetry of Motion," and ranks among the fine arts, for what can be more graceful than an expert skater skimming over the surface of the ice without apparent effort, as if propelled by some magic or unseen power? This is indeed symmetry of motion. Not only are the movements graceful, but the figures inscribed on the ice are as true as those cut by the engraver's tool.

No one who has not enjoyed its charms can fully appreciate the pleasures and delights of figure-skating. Its charms increase as proficiency is attained, and the number of figures that can be executed is unlimited. There is a fascination, and a satisfaction, too, in being able to conceive a figure and, with practice, execute it on the ice. If young people knew the joys of figure-skating there would be as many figure-skates in evidence as there are now hockey-blades.

As with everything else worth obtaining, proficiency in this branch of skating entails practice, patience, and perseverance, but the results well repay the effort. Not only is proficiency in the art acquired, but an abundance of wholesome exercise and fresh air is obtained thereby.

As in piano playing the pupil must learn his fingering, scales, and chords before he can properly play his piece, so in figure-skating the beginner must practise the simple movements—the foundation of

* See *ante*; article on, and Rules of Hockey.

figure-skating—before he can hope to properly execute the more difficult figures and designs. Learn to do the plain edges; rolls, and threes, and the other figures will come in good time.

There are some good books on the subject of figure-skating, but the *best* way to learn the proper method, style, and grace, is to watch and copy some expert.

My parting advice to the beginner, as well as the more expert, is to never learn to execute a movement or figure on one foot at the expense of the other. If you can skate a figure on the right foot, learn to do it equally well on the left.

Roller skating was invented by Jas. L. Plimpton, in New York, in 1869. It had a fierce vogue for many years and then became less popular. Recently, however, it has been revived, the skates have been improved, and the pastime has regained some of its old popularity. It is, however, a poor substitute for the real thing, and many of the best authorities on physical training object to indoor roller skating, principally on account of the unhygienic conditions in which it is too often practised.

HINTS ON SKATING.

The Start.

The skates fastened on and the novice standing on his feet, on a well-selected piece of ice, neither so smooth as to increase the difficulty he will find in keeping his feet, nor so rough as to trip him up, he should start at once. Inclining his body a little forward toward the right leg, he slides forward, with his whole weight on the right foot, which must be slightly turned outward, his other foot being slightly raised off the ice, and kept behind the right. He then brings the left foot forward, in its turn, and slides a yard or two on that foot, and so on alternately. He may, at first, make use of his hands to maintain his balance, raising or depressing them with the fingers turned upwards. He should, however, aim at skating, after a short time, entirely without the use of his arms, which look much better hanging carelessly by the side, than flung wildly about in wind-mill fashion. Some learners make use of a stick at first starting. It is better to have a companion who can skate, and, by degrees, he may leave you to your own exertions. The learner should proceed patiently, and with caution, at first, and be content to increase his speed gradually with his knowledge; the opposite extreme, however, must also be avoided, for no one ever becomes a good skater who is afraid of a fall. When the inside edge movement has once been learned, the skater will find that his progress is greatly hastened by a push given to the ice with the left skate, as he starts with the right foot, and *vice versa*; but, above all things, let him thoroughly understand "inside edge," and be confident of his own powers, before he begins practising the feats we will now describe. But first the skater must be taught.

How to Stop.

Bring the second foot down upon the ice, and glide forward, with both feet pointed in front of you, and parallel to each other, like the irons of a sledge. Bend the body forward, and throw all the weight upon the heels of the skates. Those who wear the skates with rounded heels cannot, of course, stop in this way, as the rounded irons, instead of sticking into the ice, would trip their wearer up; he puts the second foot to the ground, at right angles with the other, pointed entirely sideways, which immediately stops his career.

How to Perform the Various Evolutions.

Before the skater attempts to cut figures and other devices, he must be able to skate on the outside edge of the skate, to skate backward, and to turn round. The *outside edge* implies what it is by its name; when acquired, it sends you exactly in opposite directions, on both sides, from what the *inside edge* does. In explanation: Suppose that you are skating on the *right* foot, it is easy to turn to the left, and not so to the right, to effect which you must use the *outside* edge by striking out upon it either foot, inclining, at the same time, the skate, the leg, the body, and the head toward whichever side you are skating, holding the other foot raised up behind, and rounding the arms. The most difficult forward movement is the cross outside edge, which is done by passing one leg

across the other, and striking out with the foot as it comes down on the ice. As the foot on which you first rest disengages itself (which it will do as you proceed) from the crossed-leg position, throw that leg over the other, and, by continuing this, you will soon learn to sweep round on either side with ease. This is called the Mercury figure.

The salute in a right line is not easy of execution. Having first struck out, you must place the feet in a horizontal line, elevating and rounding the arms. Continue the movement as long as you can, or think fit to do so. This attitude, though difficult, is frequently practised by good skaters.

The salute in a curved line is much easier. Having started, you put your feet in the position you would adopt to describe the salute in a right line, only less horizontally. The head and body must be upright, the arms rounded, the hands placed on the haunches; in this position you describe a circle. You then draw yourself up, the knees having become slightly bent, and, raising the right or left foot, prepare for another evolution; as either striking out straight forward, or toward one side.

To describe circles and curves will be found the most graceful and useful of evolutions. To describe a curve on the outside edge forward, fix on some point as a centre, and take a run proportioned to the number of curves you propose describing. Strike out on the outward edge, turning in a curve round the centre fixed upon. Your eyes must look toward the shoulder opposite that which directs the general movement of the side on which you turn. The hips must be kept in, and the leg on which you are propelled bent slightly at the knee-joint; the opposite leg must also be bent, and thrown backward, to modify, by its weight and position, the impulse forward, and to insure your equilibrium.

To describe a curve, or circle, on the inside edge forward, you must select a small piece of cork, or any other light body, as a centre, take a sufficient run, and strike out on the inward edge. Your head and body must be in the position described for outward curves, only the leg on which you skate must not be bent. The opposite leg should be almost stiff, and the foot about eighteen inches distant from the one you rest upon. Curves on the inside edge are terminated by stopping in the usual manner; but if you desire to *pivot*, or turn round, you throw the foot on which you do not skate over that on which you do, and, from the impulse given to your body, in order to describe the curve, you spin round on the middle of the skate, as on a pivot. After having done this a few times, you bring down the foot you are not revolving on, and proceed to other evolutions.

To skate backward, you must incline the head and body slightly forward, in order not to lose the centre of gravity. Strike out behind on each foot alternately, and raise the heel of the skate slightly up from the ice; by this operation each foot will describe an arc or segment of a circle. Should you feel to be losing your equilibrium, bring both skates together upon the ice.

This evolution is performed sometimes on one foot, sometimes on the other, and occasionally on both together, by the help of a slight motion of the hips.

Retrograde or backward curves differ from ordinary curves by their direction only; and at first sight appear difficult, because a person cannot move backward with the same facility that he can go forward. When, however, you are used to this manner of skating, it will appear natural and tolerably easy of execution. The backward curve is of equal importance with the ordinary curve on the outside edge, and constitutes the base of all retrograde or backward figures. In this evolution the position of the arms and head is not the same as for the ordinary curve on the outside edge. When executing the outward retrograde curve, your face must be turned toward the left shoulder. The backward curve may be extended to circles, spiral rings, and be finally concluded by the *pivot*.

The oblique stop is the most proper to adopt when you are skating backward. In order to perform it, when engaged in a retrograde movement, you bring down on the ice in an oblique and transverse position the skate on which you are not resting, stiffening at the same time the leg you thus bring down. The effect of this manoeuvre is prompt and certain, and the only variation it admits of is, that it can be performed on either foot.

To turn round, bring either heel behind the other, and you turn as a matter of course.

By carefully attending to the above directions, with practice, you will be able to cut the numerical figures, or any device that you may wish. The figure 8 is the best practice, and is described by completing the circle on the outside edge forward. This is performed by crossing the legs, and striking from the outside instead of the inside edge. To cross the legs, the skater, as he draws to the close of the stroke on his right leg, must throw the left quite across it, which will cause him to press hard on the outside of the right skate, from which he must immediately strike, throwing back the left arm and looking simultaneously over the left shoulder, so as to bring him well up on the outside edge of the left skate. The 8 is formed by completing a perfect circle, in the manner described, on each leg, before changing the foot. The figure 8, which is performed on the inside edge backwards, may next be practised.

No pains should be spared upon this figure, as it is a most elegant one, and is, besides, the key to all figures. When the 8 is once mastered, other figures become quite easy. The mode of doing it is this: Start on the right foot as if going to make an 8, but do it as gently as possible. But, instead of swinging the left foot round so as to make a circle, let it remain at least a foot behind the

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right foot. The consequence of doing so is, that when three-fourths of the circle is completed, the off-foot gives a furious sway to the body, and the skater spins round on his right foot, changing at the same time from the outside to the inside edge, and cuts the second half of the 3 backwards. When the skater can do this easily with the right foot, he should practise it with the left; and when he can cut the 3 with equal ease with either foot, he should cut two together. He begins with the left-hand 3, starting with his left foot on the outside edge; when he gets to the twist of the 3 he spins round, and finishes the figure (still with the left foot) *on the inside edge backward*. His right foot is now at liberty to pass to the top of the right-hand 3, which he cuts in like manner. Especial care must be taken to keep the knees straight, and to preserve a graceful carriage of the body. If the skater should be so far off his balance as to find any difficulty in spinning round, he will gain his object by throwing his weight a very little toward the toe of the skate. The reason why the skater curves round in this twist is, that the steel of the skate has a curved form; and when for a moment the body is quite upright, the whole skate spins round on its centre, as on a pivot.

GENERAL DIRECTIONS FOR PERSONS LEARNING TO SKATE.

1. Let your dress fit closely, but at the same time be of sufficient ease to insure freedom of motion. Neither skirts to coats nor full trousers should be worn. Knickerbockers and stockings are best.
2. Let flannel be worn next the skin by the delicate, and an extra undergarment by the robust. Let the chest be well defended against the cold. A piece of brown paper laid between the waistcoat and shirt is one of the best chest protectors.
3. Be careful in venturing upon the ice, unless it be sufficiently strong to bear the weight of the number that flock to it; and watch for the increase of numbers, that you may retire before danger ensues.
4. Avoid rough and very smooth ice, and look carefully out for obstructions thereon; such as small twigs of trees, stones, or "hobbles," as well as for rotten ice, cracks where the ice has risen higher on one side than the other, or holes. Should you suddenly come upon rotten ice, do not stop, but pass over it as rapidly as possible. Should you fall down upon it roll lengthwise toward the firmer part, without attempting to stand or walk upon it.
5. Should the skater fall into a hole, he should extend his arms horizontally across the edges of the ice, till a rope can be thrown to him.
6. After an unlucky immersion in the water, the unfortunate skater should immediately take off his skates, and, if able, run home as quickly as he can. He should then pull off all his wet clothes, rub himself thoroughly with dry towels, and go to bed.

A FEW FACTS ABOUT SWIMMING.

BY

C. M. DANIELS, NEW YORK ATHLETIC CLUB.

THE art of natation has been known for many hundred years, in fact, dating back to 880 B. C., the date found on several pieces of Assyrian sculptured work, representing human figures swimming, which are now in the British Museum.

It was not until lately, however, that the sport was seriously recognized as a means of exercise and competition. Thirty years ago we find all swimmers were using the breast stroke, such as is taught to all beginners. Later the side or English racing stroke was used, but it was to Col. Trudgeon that all credit is due in regard to the discovery and perfection of the trudgeon, the stroke used by all speed swimmers for all distances; the improvement over the old side-stroke being in the less resistance offered by the air in bringing the arms forward than by the water.

People began to say then that the limit had been reached; the time taken by the fastest swimmers to cover 100 yards was about one

minute. To Dick Cavill of Australia belongs the great achievement of introducing the fastest stroke known to date, the "crawl." He found that he could swim nearly as fast without the use of his legs as he could with them, using the old stroke; and reasoning that the legs are the strongest part of a man's body, he set about to acquire a kick with his legs which would lessen the resistance and be of more benefit to him than the old stroke was, with the result that the "crawl" became the fastest stroke known. In this stroke the swimmer is nearly flat on his chest, the arms are worked the same as with the trudgeon and the legs are bent at the knees, the feet raised above the water a few inches, then brought down with a snap. With this new stroke swimmers were able to reduce their times from four to ten seconds for the hundred yards.

A great many people express surprise when informed of the fact that Americans are inferior to the English and Australian swimmers; the explanation is simple. Australia lying so near the equator boasts of a summer lasting some eight or nine months, and during all that time the water remains warm enough to make swimming not merely feasible, but a pleasure. While England, the Mecca of all speed swimmers, does not possess so much outdoor bathing, it possesses innumerable public baths in all the large towns and cities, enabling the public to bathe, for the small sum of ten cents, throughout the year. In London there are fifty-six of these baths as against the two in New York at the present time of writing. Thus it can easily be seen why we are at such a disadvantage.

As a physical benefit there is not a better sport, in my estimation, than swimming. It brings into play all the muscles of the body as evenly as possible, the deltoid and back muscles being exceptionally developed. There is no sudden strain as in a great many athletics, and the breathing is performed at regular intervals. I think swimming should be instituted in all the schools and colleges, not only because it is one of the most agreeable forms of sport, but because you can never tell when it will be of the most use to you, until comes the moment of most urgent need.

SWIMMING TAUGHT BY LAND DRILL.

BY PROF. ALEXANDER MEFFERT, CHICAGO ATHLETIC CLUB, CHICAGO, ILL.

The movements of the body in swimming are known as the arm and leg strokes. In making them the human figure assumes four attitudes, though there are really only three motions. The first attitude invariably should be on beginning the exercise or stroke. A pupil who faithfully follows the instructions given, which constitute a thorough land drill for acquiring the art of swimming, will very readily swim on going into the water and putting the lessons contained herein into practice.

POSITION 1-A.—For beginning the stroke. Stand erect, heels touching, arms extended on a slight angle in front of the line of the body, with the thumbs together, palms outward, hands at an angle of 45 degrees, the little fingers edge uppermost, fingers and thumbs compressed.

POSITION 2-A.—Sweep the arms downward and backward until they are almost at right angles with the body when standing erect. There should be no bend of the arms, the elbows remaining stiff. This constitutes the first motion.

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POSITION 3-A.—Bend the elbows, drop them to the side, sweep the hands together, palms inward, finishing the movement as the tips of the fingers touch under the chin. While the arms are making this movement another should be in progress by drawing the *right* leg upward until the knee nearly touches the trunk of the body, sole of the foot outward, toes pointing toward the knee. The proper finish of this movement leaves the *right* leg extended, well off the ground, and the hands touching under the chin. This constitutes the second motion.

POSITION 4-A.—Is reached by straightening out the right leg as if to kick a person or object standing well off to the right side. When the limb is extended sweep it downward until the heels touch. Simultaneously both arms should be extended from the pose of Position 3-A until they meet, fully extended, above and slightly in front of the head. This constitutes the third motion.

POSITION 1-B.—This again is as it should invariably be for beginning the stroke. Stand erect, heels touching, arms extended at a slight angle in front of the line of the body with thumbs together, palms outward, hands at an angle of 45 degrees, little fingers edge uppermost. Fingers and thumbs compressed.

POSITION 2-B.—Sweep the arms downward and backward until they are almost at right angles with the body. There should be no bend of the arms, the elbows remaining stiff. This constitutes the first motion.

POSITION 3-B.—Bend the elbows, drop them to the side, sweep the hands together, palms inward, finishing the movement as the tips of the fingers touch under the chin. While the arms are making this movement another should be in progress by drawing the *left* leg upward until the knee almost touches the body, sole of the foot outward, toes pointing toward the knees. The proper finish of the movement leaves the *left* leg extended and well off the ground and the hands touching each other under the chin. This constitutes the second motion.

POSITION 4-B.—This is reached by straightening out the left leg as if to kick a person or object standing well to the left side. When the limb is extended sweep it downward until the heels touch. At the same time both arms should be extended from the pose as in position 3-B, until they meet, fully extended, above and slightly in front of the head. This constitutes the third motion.

POSITION 1-C.—The body is once more in the proper pose for beginning a stroke. Erect, heels touching, arms fully extended at a slight angle in front of the line of the body, thumbs together, palms outward, hands held at an angle of 45 degrees, little fingers edge uppermost, fingers and thumbs compressed.

POSITION 2-C.—Sweep the arms downward until they are almost at right angles with the body. Avoid bending the arms and keep the elbows stiff. This constitutes the first motion.

POSITION 3-C.—Bend the elbows, dropping them to the side, sweeping the hands together, palms inward, finishing the hand motion as the tips of the fingers touch under the chin. While this movement is being completed stoop the body to a crouching posture. This constitutes the second motion.

POSITION 4-C.—Extend the hands upward until they meet fully outstretched above and slightly in front of the head. During this action straighten the lower limbs from the crouching position as in 3-C until the legs are once more fully extended with heels together and body entirely erect. This constitutes the third motion.

NOTE.—Though the arm and leg positions are described by four figures, there are in reality only three motions to the arms and two to the legs. The first in each of the series of positions indicates only how the body should be at the outset. The initial motion is described in each series in position two and to fully impress the motions upon the mind of the pupil should be counted in one-two-three order, the count invariably beginning with position two. Example—count "one" as the hands sweep downward from the initial or key position, to the pose in position number 2; count "two" as the hands and legs are brought into the pose in position number 3, and count "three" as the limbs are returned to the pose in position number 4.

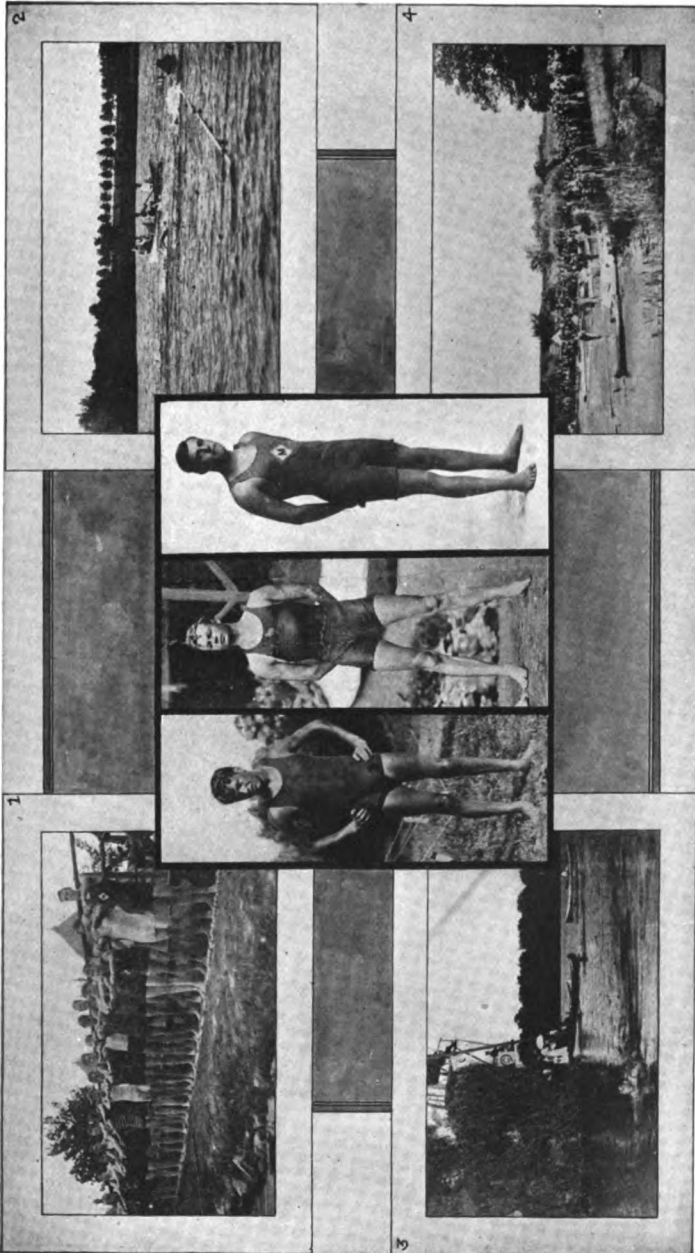
BREATHING.—As the arms sweep downward (counting one) inhale deeply and hold breath until the arms are extended for third motion, when the pupil should exhale.

SWIMMING : SOME PRACTICAL RULES.

RULE 1.—Keep the hands and feet well below the surface, and immerse the whole body up to the chin.

The reasons for this rule are simple; the flotation of various bodies is exactly in proportion to the quantity of water displaced. No man can stand upright upon the water, because the amount of water displaced by the soles of the feet would not counteract the weight of the body, and it will be seen, by the simple carrying out of this principle, that exactly in proportion to the immersion of the body is it sustained by the water.

All practical swimmers know that when a man swims with his whole head and part of his shoulders out of water, he cannot endure for any length of time, because the force that ought to be used in propulsion is wasted upon sustaining the body.



THE GREAT SWIMMING MATCH FOR THE WORLD'S
CHAMPIONSHIP AT ST. LOUIS, 1906

1. A Few A.M.M. Swimming Candidates.
2. The 220-Yard Swim.
3. Goessling winning back-stroke race.
4. At the Finish.
5. H. J. Handy, C.A.A.
6. C. M. Daniels. (The Champion Swimmer.)
7. Marquard Schwarz.

Every inch of the body that is raised above the surface becomes a dead weight, pressing the body under water and calling for great exertion on the part of the swimmer. Many persons, when they fall into the water, plunge about and try to lift themselves out of it, acting as if they were attempting to kneel upon its surface. This action is instinctive, and is one of those where instinct is inferior to reason. In point of fact, ninety-nine out of every hundred who perish in the water, drown themselves as effectually as if they had tied a heavy weight round their necks.

The weight of the head, breast, and arms of a human being is, on the average, about forty pounds; and when a drowning person lifts those portions of the body above the surface, he practically acts as if he fastened a forty-pound weight upon his head.

RULE 2.—Hollow the spine and throw the back of the head upon the shoulders.

Bulk for bulk, the body of an ordinary human being is about the same as that of the water. There are, however, two exceptional portions—namely, the head, which is somewhat heavier, and the chest, which is much lighter. Any one will, therefore, see that it is most essential to support the former upon the latter, as well as to make the water support both as much as possible.

By hollowing the spine and throwing the back of the head upon the shoulders, the heavy, solid mass of the brain is supported by the air-filled lungs, and the eyes and nostrils are kept above the surface. As to the mouth, that may be above or below the surface, for, if the lips be kept firmly closed, and respiration conducted through the nostrils, no water can enter.

The chief object in hollowing the back is, that it aids the swimmer in keeping his nostrils out of the water. No viler habit can be found than that of rounding the back, and there is none which is so difficult to eradicate.

RULE 3.—Move the limbs quietly.

A good swimmer is at once distinguished by the ease and quietude of all his movements. The arms and legs are swung out to their fullest extent, sweep round in the water equably, and are drawn up for another stroke, without the least hurry. The bad swimmer, on the contrary, never waits long enough to make a full stroke, but gives short and hurried jerks with his arms and legs, never extending them more than half their length.

The *slow stroke* is the very essence of good swimming. Of course, we are not speaking of racing, when the strokes are necessarily quick and powerful, but merely of the method of obtaining a good and enduring style. Try how far you can go at each stroke, and do not draw back the limbs until the force of the stroke is all but exhausted. At first you will appear to make but little progress; but the endurance of the long, slow stroke is surprising, and its speed by no means contemptible.

Aids to Swimming.

The plank may be serviceable to enable the beginner to throw out his legs and feet. A piece of wood, a yard in length, two feet in breadth, and about two inches in thickness, will be found best adapted for the purpose. When the pupil can support himself, the plank being thrown into the water, he should grasp one end of it with both hands, and striking out his legs, push it on before him; but if he let go the plank, he will probably be left to sink.

The best aid to a young swimmer is a judicious friend, himself a good swimmer, who will hold up his head, when he strikes off, by the "tip of the finger to the tip of the chin," and who at the same time will show him how to strike off, and how to manage his hands and feet. It is not a bad plan to put a spar from a boat, to which a rope is attached, which the young learner may make use of by affixing it to a belt round his body under his arms, which will afford him support while he learns to strike his legs in the water. The rope may also be held in the hand of a friend, by the side of the boat, and the learner may strike off hands and feet as the boat proceeds. The plank is a dangerous aid, from its tendency to slip about, and to take the swimmer out of his depth, and although it has many advantages, is very unsafe. The safest plan of all is, for the learner to advance gradually up to his armpits in the water, and then turning about, to strike slowly out toward the shore, taking care to keep his legs well up from the bottom. Rigid perseverance in this course will in a very short time enable the youngster to feel himself afloat, and moving at "all fours,"—a delight equal to that experienced by the child who first feels that he can walk from chair to chair.

Striking off and Swimming.

In striking off, the learner, having turned himself to the shore, as before recommended, should fall toward the water gently, keeping his head and neck perfectly upright, his breast advancing forward, his chest inflated; then, withdrawing the legs from the bottom, and stretching them out, strike the arms forward in unison with the legs. The back can scarcely be too much hollowed, or the head too much thrown back, as those who do otherwise will swim with their feet too near the surface, instead of allowing them to be about a foot and a half deep in the water. The hands should be placed just in front of the breast, the fingers pointing forward and kept close together, with the thumbs to the edge of the forefingers; the hands must be made rather concave on the inside, though not so much as to diminish the size. In the stroke of the hands, they should

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be carried forward to the utmost extent, taking care that they do not touch the surface of the water; they should next be swept to the side, at a distance from, but as low as, the hips; and should then be drawn up again, by bringing the arms toward the side, bending the elbows upward and the wrists downward, so as to let the hands hang down while the arms are raising them to the first attitude.

How to Manage the Legs.

The legs, which should be moved alternately with the hands, must be drawn up with the knees inward, and the soles of the feet inclined outward; and they should then be thrown backward, as widely apart from each other as possible. These motions of the hands and legs may be practised out of the water; and whilst exercising the legs, which can only be done one at a time, the learner may rest one hand on the back of a chair to steady himself, while he moves the opposite leg. When in the water, the learner must take care to draw in his breath at the instant that his hands, descending to his hips, cause his head to rise above the surface of the water; and he should exhale his breath at the moment his body is propelled forward through the action of the legs. If he does not attend precisely to these rules, he must invariably have a downward motion, and as the boys say, swim furthest where it is deepest.

Swimming under Water.

When under the water, the swimmer may either move in the usual way, or keep his hands stretched before him, which will enable him to cut the water more easily, and greatly relieve his chest. If he observes that he approaches too near the surface of the water, he must press the palms of his hands upward. If he wishes to dive to the bottom, he must turn the palms of his hands upward, striking with them repeatedly and rapidly whilst the feet are reposing; and when he has obtained a perpendicular position, he should stretch out his hands like feelers, and make the usual movement with his feet, then he will descend with great rapidity to the bottom. It is well to accustom the eyes to open themselves under the water, at least in those beds of water that admit the light, as it will enable the swimmer to ascertain the depth of water he is in.

Swimming on the Side.

In this, the body is turned either on the left or right side, while the feet perform their usual motions. The arm *from under* the shoulder stretches itself out quickly, at the same time that the feet are striking. The other arm strikes at the same time with the impelling of the feet. The hand of the latter arm begins its stroke on the level with the head. While the hand is again brought forward in a flat position, and the feet are contracted, the stretched-out hand is, while working, drawn back toward the breast, but not so much impelling as sustaining. As swimming on the side presents to the water a smaller surface than on the waist, when rapidity is required, the former is often preferable to the latter.

Swimming on the Back.

In this the swimmer turns upon his back in the water by the combined motion of the arm and leg, and extending his body, his head being in a line with it, so that the back and upper part of the head may be immersed, while the face and breast are out of the water. The hands should be placed on the thighs straight down, and the legs moved as in forward swimming, taking care that the knees do not rise above the surface in striking them out. Sometimes the hands are used after the motion of a wing or fan, by which a slight progression is also made at the same time that the surface of the body is well lifted out of the water.

Swimming on the Back without Employing the Feet.

This is twofold: 1. *In the direction of the feet.* Lie in a horizontal position, the feet stretched out stiffly, and the heels and toes in contact; then the body is to be somewhat curved at the seat, the hands are to be stretched flatly forward over the body, and, slowly striking in small circles, the loins are somewhat drawn up at each stroke. 2. *In the direction of the head.* The body is placed horizontally, but somewhat curved in the seat, the head in its natural position, the arms are kept close to the body, with the elbows inclined inward, and the hands describe small circles from the back to the front, at about a foot and a half from the hips. These modes serve to exercise and strengthen the arms in an extraordinary degree without in the least fatiguing the breast.

Floating.

Lie horizontally on the back, the head bent backward as much as possible, the arms stretched out over the head in the direction of the body, the feet left to their natural position; if they sink, the loins must be kept as low as possible. In this position, the bather remains, and may float at pleasure. The lungs should be kept inflated, that the breast may be distended, and the circumference of the body augmented. In order not to sink while in the act of taking breath, which the greater specific weight of the body would effect, the breath must be quickly expelled, and as quickly drawn in again, and then retained as long as possible; for, as the back is in a flat position, the sinking, on account of the resistance of

the water, does not take place so rapidly but the quick respiration will restore the equilibrium before the water reaches the nose.

Treading Water.

This is a perpendicular position of the swimmer, and is of great use to enable him to save a person from drowning. It is in general thought to be extremely difficult, but it is very easy. There are two ways of performing the action: in the first the hands are compressed against the hips, and the feet describe their usual circle; the other mode consists in not contracting both legs at the same time, but one after the other, so that while the one remains contracted the other describes a circle. In this mode, however, the legs must not be stretched out, but the thighs are placed in a distended position, and curved as if in a half-sitting posture.

To Swim like a Dog.

In this motion each hand and foot is used alternately, as a dog uses them when swimming, as the term implies. The hands are alternately drawn toward the chin in a compressed form, and then expanded and slightly hollowed, with fingers close, and, as they strike the water, the feet are likewise drawn toward the belly, and struck backward with a kind of kick. This mode of swimming is of use to relieve the swimmer, from time to time, when going a distance.

Hand Over Hand Swimming.

In this process the right hand is lifted out of the water from behind, swung forward through the air with a kind of circular sweep, to the extent of its reach forward, then dropped into the water edgewise, and immediately turned—with the palm a little hollowed—downward, the body being at the same time thrown a little on one side, and the right leg struck out backward to its full extent. The hand descends toward the thigh, and then passes upward through the water in a kind of curve toward the surface. The left hand and leg perform a similar movement alternately with the right, and the measure of progression attained by these combined similar movements is very considerable.

Plunging and Diving.

There are two kinds of plunging; that belonging to shallow, and that belonging to deep water. In shallow-water plunging, the learner should fling himself as far forward as possible into the stream at a very oblique angle; and when he touches the water he should raise his head, keep his back hollow, and stretch his hands forward. In the deep-water plunge, his body is to descend at a greater angle; his arms are to be stretched out, his hands closed and pointed, and his body bent, so that his nose almost touches his toes.

Diving is one of the greatest amusements connected with swimming. There are many kinds; the two most common and easiest and necessary modes of going below the surface are:

1. The feet-foremost jump.
2. The head-foremost jump.

In the first, the legs, arms, and head are to be kept perfectly rigid and stiff. The pupil must not allow fear, or the strange sensation felt in the bowels in leaping from considerable heights, to induce him to spread the arms or legs, or to bend his body.

In the second mode, or head-foremost plunge—which is the safest mode for persons who are heavily built about the chest and shoulders, if they have to enter the water from heights,—the head is drawn down upon the chest, the arms stretched forward and hands closed to a point; and as soon as the swimmer feels that he has left the bank, his knees, which till then were bent, are to be stiffened. The diver must avoid striking on the belly—the general consequence of fear; and turning over so as to come down on his back or side—the consequence of pushing with the feet. When he has gone as deep as he wishes, the arms are to be raised and pressed downward.

Saving from Danger.

Above all things, the good swimmer should be anxious to save life, and to rescue those who are in danger, *without himself becoming the victim, as it often happens.* The following rules are highly important to be observed: The swimmer must avoid approaching the drowning person in front, in order that he may not be grasped by him; for whatever a drowning person seizes, he holds with convulsive force, and it is no easy matter to get disentangled from his grasp; therefore, he should seize him from behind, and let go of him immediately if the other turns toward him. His best way is to impel him before him to the shore, or to draw him behind; if the space to be passed be too great, he should seize him by the foot and drag him, turning him on his back. If the drowning person should seize him, there is no alternative for the swimmer than to drop him at once to the bottom of the water, and there to wrestle with his antagonist; the drowning man, by a kind of instinct to regain the surface, when drawn down to the bottom, usually quits his prey, particularly if the diver attacks him there with all his power.

For two swimmers the labor is easier, because they can mutually relieve each other. If the drowning person has still some presence of mind remaining, they

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will then seize him, one under *one arm*, and the other under the other, and without any great effort in treading water, bring him along, with his head above water, while they enjoin him to keep himself stretched out and as much as possible without motion.

The Cramp.

The cramp generally proceeds from acidity of the bowels, arising from a bad state of the stomach, or from the effects of the cold water on the muscular system. Some persons are very subject to it on slight occasions, and such persons will do well never to go out of their depth. But should a tolerable swimmer be seized with the cramp, he should not be frightened, but the moment the cramp is felt in the foot or leg, strike out that foot or leg, with the heel elongated, and the toes drawn upward toward the shin-bone, never minding any little pain it may occasion, as he need not fear breaking a bone, muscle, or tendon. Should this not succeed, he should throw himself on his back, and float quietly, and paddle himself gently to the shore. He may also swim with his hands, like a dog, and practise any of the motions of the upper part of the body for keeping his head above water till assistance arrives.

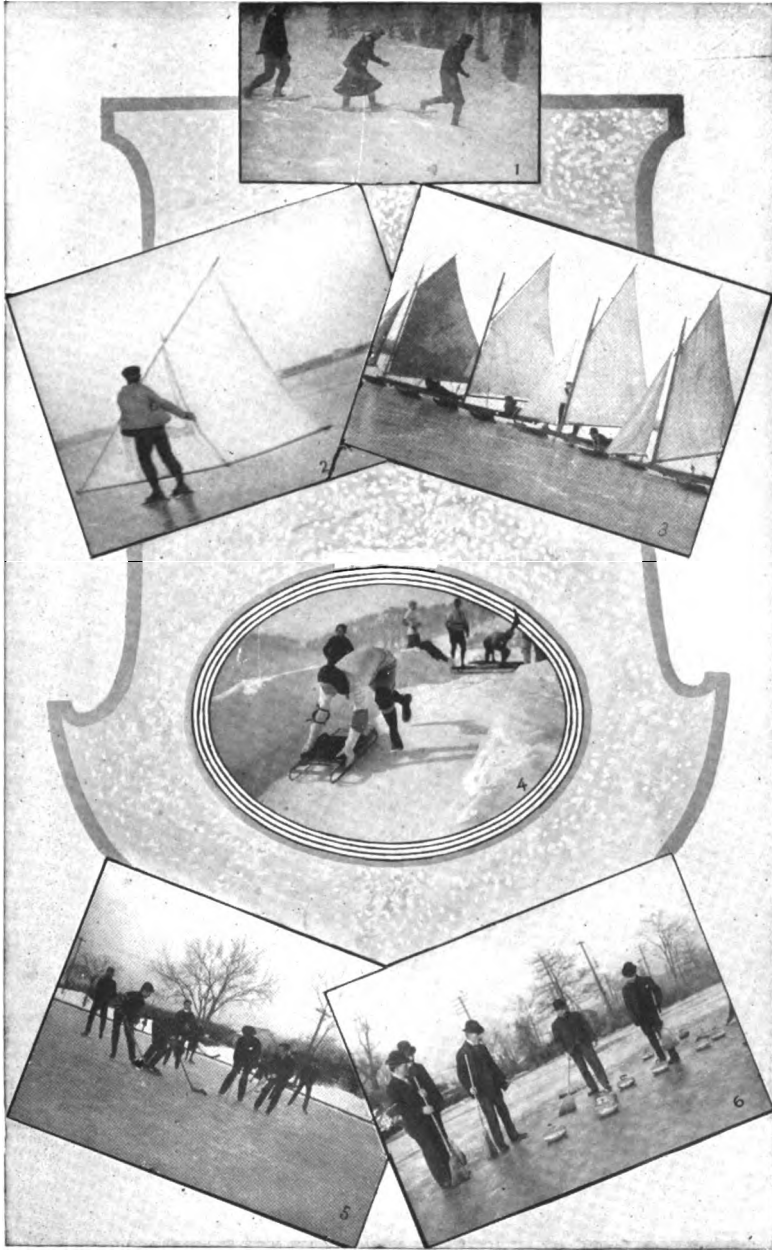
SNOW-SHOEING.

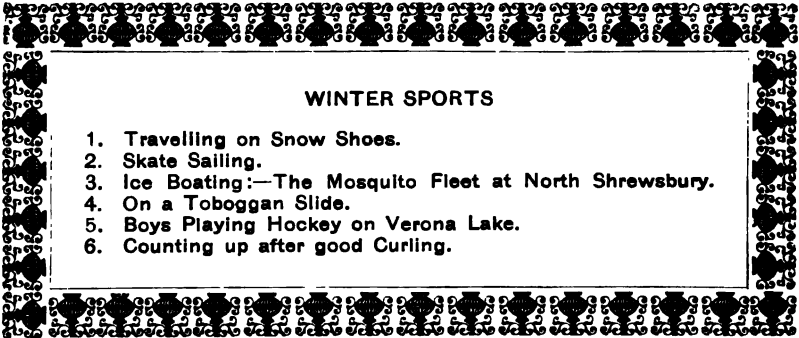
SNOW-SHOEING is a pastime much enjoyed in the more northern sections of the country and proficiency in the art is often of real practical value. Snow-shoes are made of a single light strip of hickory or ash, the ends are bent until they meet, and then bound together for from 6 to 10 inches. Thin pieces of flat wood are fitted across the frame to strengthen it, and it is then woven with thongs or tendons, so as to make a sort of basket-work. It is from three to six feet in length, and from 12 to 20 inches wide. It is fastened to the foot by a toe-strap and two thongs that pass over the instep. The toe of the foot points toward the rounded end of the snow-shoe. The heel is left free to rise and fall, and a hole is left in the basket-work under the toe-strap, into which the wearer's toe sinks at every step. It requires much practice to attain skill in snow-shoeing. The shoe enables the walker to slip or slide over the surface of the snow with as much ease as on hard ground, the basket-work bearing the weight of a man in places where without it he would sink. The shoe should be raised a little with the toe at the beginning of the step, letting the end trail, keep head and shoulders erect, and glide the shoes one over the other. Beginners are apt to catch the toe of one shoe under the edge of the other, and so trip themselves up.

TOBOGGANING.

TOBOGGANING is one of the most ancient methods of progression and transportation in this country, and is fine sport as well. The Indians employed it for centuries and the word is of Indian origin.

The toboggan is really a sled without runners, and the frame is made of tough elastic wood about a quarter of an inch thick. They





WINTER SPORTS

1. Travelling on Snow Shoes.
2. Skate Sailing.
3. Ice Boating:—The Mosquito Fleet at North Shrewsbury.
4. On a Toboggan Slide.
5. Boys Playing Hockey on Verona Lake.
6. Counting up after good Curling.

are eight feet long, and sixteen to twenty-four inches wide. Across the upper side ribs or cleats of wood are fastened to give them strength, and along the side are hand-rails, to which the coasters may cling, and to which cushions are often strapped. The front is bent backward in a curve to form a sort of dashboard. The original toboggan slide was a natural one down the side of a hill. The artificial slide, the idea of which came from Russia, is made of boards covered with snow and ice, and often slopes down to the ground from a height of from 40 to 50 feet. In Canada and the Northern States they are a great feature of the Ice Carnivals, and furnish much sport for both sexes, who disport themselves in gay attire specially suited to the frequent spills in the snow, to which the skilled as well as the unskilled performer is often liable.

TRACK AND FIELD ATHLETICS.

BY

J. E. SULLIVAN, SECRETARY-TREASURER AMATEUR ATHLETIC UNION
OF THE UNITED STATES.

TRACK Athletics in America must now be considered as being on a very solid foundation, and experts are of the opinion that Track Athletics is the very foundation of our entire physical training structure. Running, walking, jumping, and throwing are natural forms of exercise; natural to the child and natural to the boy, and as such are considered to-day as valuable adjuncts in all educational institutions throughout America.

The history of track and field athletics in America is interesting because it shows a steady growth. There has never been a boom recorded in its history; it has steadily and quietly gone forward, and its present position is due to the hard and energetic work performed by a great many men in America during the past twenty-five years.

America held its first championship meeting, recognized as such, in 1876, and from that time to this track and field championships have been fixtures. The colleges took up track and field athletics about the same time, and from '76 to date they have held annual track and field championships.

How athletics has grown both in the outside and the college world is well known to all. The most remarkable growth in the past ten years has been school-boy athletics, and to-day the school-boy element is an important factor in athletics. The creation of the Public Schools Athletic League in the City of New York has done more for school-boy athletics than has ever been accomplished by any similar organization.

Athletics in public schools, or track and field play as it might be termed, is now conducted in a business-like manner—there is system

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to it—and the boys are given ample opportunity to indulge in all forms of sport under proper regulations. What is being done by them is best shown by glancing at the report of the recent World's Elementary Schools Championships, wherein no less than 20,000 boys competed in the games held among the different schools, and 2,000 took part in the final-day competition. Such a meeting is simply remarkable and speaks well for the growth of athletics. The Public Schools Athletic League will, from now on, be popular.

It has always mystified New Yorkers that cities like Chicago, Pittsburgh, Cleveland, Cincinnati, Boston, and others too numerous to mention, have not as yet organized Public Schools Athletic Leagues. It has been proven that these leagues are needed in many ways. According to the present plan in New York, a boy must be a student; he cannot have all play. The principal and teacher control the boy's right to compete. Besides that it teaches them to play fair and makes them subject to discipline. As a whole it has worked remarkably well in New York, and the benefits that will be derived from it in later years cannot be appreciated now. The members will naturally be the competitors for the high schools and colleges, they will make better students, and therefore in five or ten years from now our colleges will have phenomenal athletes.

The question of amateurism is one that is being discussed, and discussed quite generally. We have had a case of a so-called college man and amateur, who was nothing more than a fraud; who, while he was an amateur, was getting all the money he could, deceiving his companions and national officials, and then upon his retirement from athletics, he personally came forward and proclaimed that he had made money all through his athletic career. Of course, the finding out of a specimen of this kind hurts sport, and it is to be hoped that in the future the high schools, preparatory schools, and colleges will teach straightforwardness and honesty to the contestants. If they are taught these qualities they cannot go far wrong.

The history of athletics from a record standpoint is interesting. A glance at the records of '74 and '75 show that the American amateur athlete was not the possessor of an athletic "best on record." With, however, the coming of the world's greatest runner, L. E. Myers, in the early eighties, came a change in America's record books, and from that time to this America has excelled in athletics, and nearly all of the records to-day are a credit to the American athlete. We have excelled the English each time we have met them in International competition. The famous International Meeting of 1895 was the first meritorious win. Again at Paris in 1900, and at Athens in 1906, the American athlete proved conclusively his superiority. It must be said, however, that in distance running England is our superior. England produces distance men that are superior to Americans. This will be changed. Cross-country running in America will benefit the distance men, and just now we are enjoying a cross-country boom.

SPRINT OR SHORT DISTANCE RUNNING.

BY

PROFESSOR J. W. SIMS, Y. M. C. A., PHILADELPHIA, PA.

MAY we look at a programme of field-day sports? The first thing we see is the 100-yard dash. What is the chief element in this race? Is the start the most important? What is the requisite quality? A good active muscular system and lung power, and a brain that acts quickly, that will give the signal to act instantly. The man with a keen, wiry muscular system usually gets off before his opponent at the start, but is that all? What about that fellow that is always trying to steal the start? It is important to stand firm and wait patiently until you hear the crack of the pistol. I well remember being selected to act as starter in a dual meet of two of our important universities, and one of the trainers came to me, asking if I would not start the men quicker in the final heat, and my reply was, "Tell your men to set firmly, and just as soon as all are still, I will start them and not before."

A false start often wins a race, but the one who practises getting off before the crack of the pistol is the one whom honest athletes despise; but because these things do come to pass and he succeeds in gaining the prize, what satisfaction comes to him? I believe that honesty pays an hundred fold. I have heard this said, "No matter how you get there, win at any price." If demerit and dishonesty of taking mean advantage of the other fellow in a race are to win, why, drop athletics, but if we understand something more, higher, than a worldly triumph is the prize, why, our aims are purer and loftier. A good conscience is a greater reward than being first in the race. Whatever may be the chance of winning the prize, then, it will not profit the athlete to stray over the borders which we know are right and square, and thus lose the grip of honor. There is one thing sure, that we cannot evade the sting of conscience and remorse if our acts condemn us. Then, fellows, do to others just as you would they do to you. Be manly and true in the race and on the athletic field. The man who is clean in athletics is the man who is most admired.

It is most important to have regular sleep to restore the worn-out, jaded body and brain to a healthy condition. As regards the amount of sleep which a healthy adult requires during the twenty-four hours: on the average it should not be less than seven, or better, eight hours. Every boy, therefore, ought to make it a plan to cultivate the habit of regularity, to retire at a certain hour every night. "Early to bed, early to rise," is a good maxim. What is more invigorating than a good night's rest? To the boy: Begin your exercise lightly until you grow stronger, then take it more strenuously. Your work should be a delight, and be done most heartily, not by halves or shifts, but with a

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will; what is not worth the effort should not be attempted at all. Victory comes hard sometimes, but it pays even by the good vigorous constitution and health attained.

I have observed wonderful improvement in the whole body and in the general good health in many of my pupils who have taken up track athletics as a recreation, not so much as developing a prize winner, but for the sole purpose of recreation. All sports should be recreative to be beneficial.

As to the diet. Eat slowly, masticate the food thoroughly. If the food is not chewed sufficiently, there will be lack of nourishment carried to the body. The athlete can select those articles of food that he thrives on; in other words, if he gains a little weight each week and is improving in speed and in endurance, he can rest assured that he is all right. Select that which is most nutritious; do not tax the stomach by overeating, avoid pastry and rich foods. "To breathe rightly is as important as to eat rightly." Pure air and the right kind of diet go together, which in order to be of use must be properly assimilated by the system. One of the best exercises, and I think the most beneficial for the development of the vital and respiratory organs is the easy running. Just a word to the one who has neglected physical exercise, and who is desirous to regain vim and good health so that he may run the race of life in a happy frame of mind and contentment. Be moderate in all things, take things easy, take no strenuous work, but be a boy again; play golf, cricket, and tennis, and again let me impress this fact; to secure the best of health do no violent exercise.

All men acknowledge that running in the fresh air is an excellent exercise. To be a first-class pedestrian it is necessary to take a systematic course of training. I would advise the young athlete: First, to see that his system is in proper condition, and to be regular in his habits. The second thing of importance is to have the proper diet; the food should be cooked so that it will digest easily. Thirdly, the right kind of exercise. The would-be sprinter should not try to run fast for several days; a run of one hundred yards at no more than a jog trot, say in about eighteen seconds, would be wise. Run this distance two or three times the first day, after which take a sponge bath (salt water preferred) and finish with a vigorous rubbing down. The second day try one hundred and fifty yards; be sure to walk back to the starting place very leisurely, so that your endurance will be sufficient to enable you to repeat the exercise without fatigue; do not try to run faster than the first day. The third day try two hundred yards and so on until you can run five or six hundred yards without being distressed. The object in running these distances so slowly is this: In ordinary breathing we use only a portion of our lungs; the cells at the extremities are not brought into play. By gradually bringing these neglected cells into action we obtain better results; then the special respiratory muscles that have not been used are steadily

strengthened. The muscles of the legs, arms, and trunk are gradually developed, and therefore better able to stand the strain of a good "spurt." It is important then, to go slow at the beginning, or the chances are that a strain or a more severe injury to the muscles or tendons will be the result. When the pedestrian is prepared for vigorous work, the first thing to do is to get the very best possible way of starting. There are no two men who start exactly alike. Get some experienced "trainer" to start you in several ways by the report of the pistol. He will very soon be able to advise you as to which is best. When you have decided on the way to start, measure the distance between the starting lines and the hole where the back foot goes, so that you will not under or over stride. I have known men to alter their stride or position on the day of a race, who by so doing have failed to get off with the report of the pistol. It is a good plan to have a stranger to start you in your practice once in a while, but be sure that he is competent.

As soon as one is prepared for the track with only his running suit on, he should keep moving, unless it is very warm weather. It is not necessary to run the full distance more than twice or three times a week when in good condition, but it is necessary to be on the track every day and run fifty or seventy-five yards at top speed. The day before running a "trial," only the lightest kind of exercise should be taken, and be sure to wear the clothing and "pumps" you are to use in the race. A trial should be run on the track where the race is to take place, and at the same hour of the day as near as possible. It is not considered graceful to swing the arms across the chest; this sways the body from side to side. The arms should be thrust out straight so that they will assist the legs in propelling the body forward. It is a good plan to have corks to grasp in the hands whilst running. It will be found helpful to hard work. Do not keep the body straight or the head thrown back, but rather bend forward with the chin down, and use the body with as much elasticity as possible. In breathing get the lungs brim-full before starting, and take the breath the quickest way while in the race. It is a good plan to take one or two easy spins before the race. Should any dispute arise, the contestant should not take part in it, but let his friend or trainer settle it.

Keep cool, remembering that since you have made a certain time in your trial you can say with confidence, "If this will win I shall 'get there.'" In conclusion, I would say that there is a great change in the mode of training to-day compared with that of fifteen or even ten years ago. I had the misfortune to train under the instruction of one of those old-time "peds" and will briefly relate something required of me. Rise at 5.30, take a cold bath, drink a glass of old sherry wine, walk eight miles before breakfast, then in the one cup of tea allowed was mixed a small glass of rum, at lunch a glass of stock ale, another glass of ale at dinner, and one after running in the afternoon, also one at supper, and a glass of rum before retiring.

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Seven glasses of intoxicating liquor and often more each day. Is this not the way to develop a drunkard? These "professional trainers" did not know much. If they had only read the Bible and studied the characters portrayed therein! Take the life of Daniel, one of the children of Israel, in captivity, but who was without blemish, and skilled in all wisdom. He did not defile himself with the portion of the king's meat and wine. I have trained without using wine or liquor of any kind, and have run faster without it, and my endurance has also been improved.

TRACK ATHLETICS.

RULES OF THE AMATEUR ATHLETIC UNION EVENTS.

100-yard dash, 220-yard dash, One-quarter mile run, One-half mile run, and the One-mile run; also, Running five miles.

Hurdle racing, 120 yards with hurdles 3ft. 6in., 220 yards with hurdles 2ft. 6in.

Walking one mile, Walking three miles, Walking seven miles.

Running high jump, and the Broad jump.

Pole leaping, Putting the shot, Throwing the hammer, Throwing 56-lb. weight, Bicycle racing, Individual Tug of War, and Tug of War with teams of five men.

RULE 1.—Officials.—SECTION 1. All amateur meetings shall be under the direction of: A Games Committee, One Referee, Two or more Inspectors, Three Judges at Finish, Three or more Field Judges, Three Timekeepers, One Judge of Walking, One Starter, One Clerk of the Course, One Scorer, One Marshal.

SEC. 2. If deemed necessary, assistants may be provided for the Judge of Walking, the Clerk of the Course, the Scorer, and the Marshal, and an Official Announcer may be appointed.

RULE 2.—The Games Committee. The Games Committee at any club meeting shall be composed of members of the Club holding the meeting.

This Committee shall have jurisdiction of all matters not assigned by these rules to the Referee or other games officials. (See also Rule 15.)

RULE 3.—The Referee shall decide all questions relating to the actual conduct of the meeting, whose final settlement is not otherwise covered by these rules. He alone shall have the power to change the order of events as laid down in the official programme, to add to, or to alter the announced arrangement of heats in any event.

RULE 4.—The Inspectors. It shall be the duty of an Inspector to stand at such point as the Referee may designate; to watch the competition closely, and in case of a claim of foul to report to the Referee what he saw of the incident.

Such Inspectors are merely assistants to the Referee, to whom they shall report, and have no power to make any decisions.

RULE 5.—The Judges at Finish shall determine the order of finishing contestants, and shall arrange among themselves as to noting the winner, 2d, 3d, 4th, etc., as the case may require.

Their decision in this respect shall be without appeal, and in case of disagreement a majority shall govern.

RULE 6.—The Field Judges shall make an accurate measurement, and keep a tally of all trials of competitors in the high and broad jumps, the pole vault, the weight competitions, and the tug of war.

They shall act as judges of these events, and their decisions shall likewise be without appeal. In case of disagreement a majority shall govern. In all weight competitions and jumps for distance, a small flag, placed in the ground, shall denote the best throw or jump as the contest progresses.

RULE 7.—The Timekeepers shall individually time all events where time record is called for. Should two of the three watches mark the same time and the third disagree, the time marked by the two watches shall be accepted. Should all three disagree, the time marked by the intermediate watch shall be accepted.

The flash of the pistol shall denote the actual time of starting.

In case only two watches are held on an event, and they fail to agree, the longest time of the two shall be accepted.

RULE 8.—The Starter shall have sole jurisdiction over the competitors after the Clerk of the Course has properly placed them in their positions for the start.

NOTE.—The track upon which the running races take place, both in America and in England, is made up of about four inches of ashes, screened, raked, and levelled, and covered with a couple of inches of loam. This is rolled and watered for weeks and sometimes months before the events come off, and the loam is then covered with a final layer of cinders, well raked and rolled.

The method of starting shall be by pistol report, except that in time handicap races the word "go" shall be used.

An actual start shall not be effected until the pistol has been *purposely* discharged after the competitors have been warned to get ready.

When any part of a competitor shall touch the ground in front of his mark before the starting signal is given, it shall be considered a false start.

Penalties for false starting shall be inflicted by the Starter, as follows:

In races up to and including 300 yards, the competitor shall be put back one yard for the first and another yard for the second attempt; in races over 300 yards and including 600 yards, two yards for the first and two more for the second attempt; in races over 600 yards and including 1000 yards, three yards for the first and three more for the second attempt; in races over 1000 yards and including one mile, five yards for the first and five more for the second attempt; in all races over one mile, ten yards for the first and ten more for the second attempt. In all cases the third false start shall prevent his competing in that event.

The Starter shall also rule out of that event any competitor who attempts to advance himself from his mark, as prescribed in the official programme, after he has given the warning to "get ready."

RULE 9.—*The Clerk of the Course* shall be provided with the names and the numbers of all entered competitors, and he shall notify them to appear at the starting line before the start in each event in which they are entered.

RULE 10.—*The Judge of Walking* shall have sole power to determine the fairness or unfairness of walking, and his rulings thereon shall be final and without appeal.

He shall caution any competitor whenever walking unfairly; the third caution to disqualify, except that he shall immediately disqualify any competitor when walking unfairly during the last 220 yards of a race.

He shall control his assistants, and assign to them such of his duties as he may deem proper.

RULE 11.—*The Scorer* shall record the order in which each competitor finishes his event, together with the time furnished him by the Timekeeper.

He shall keep a tally of the laps made by each competitor in races covering more than one lap, and shall announce by means of a bell, or otherwise, when the leading man enters the last lap.

He shall control his assistants, and assign to them such of his duties as he may deem best.

RULE 12.—*The Marshal* shall have full police charge of the enclosure, and shall prevent any but officials and actual competitors from entering or remaining therein.

He shall control his assistants, and assign them their duties.

RULE 13.—*The Official Announcer* shall receive from the Scorer and Field Judges the result of each event, and announce the same by voice or by means of a bulletin board.

RULE 14.—*Competitors* shall report to the Clerk of the Course immediately upon their arrival at the place of meeting, and shall be provided by that official with their proper numbers, which must be worn conspicuously by the competitors when competing, and without which they shall not be allowed to start.

Each competitor shall inform himself of the time of starting, and shall be promptly at the starting point of each competition in which he is entered, and there report to the Clerk of the Course.

Under no condition shall the attendants be allowed to accompany competitors at the start or during any competition except in match races, where special agreements may be made.

RULE 15.—*Protests* against any entered competitor may be made verbally or in writing to the Referee, or a member of the Games Committee, before or during the meeting. If possible the Committee shall decide such protest at once. If the nature of the protest or the necessity of obtaining testimony prevents an immediate decision, the competitor shall be allowed to compete under protest, and the protest shall be decided by the Games Committee within one week, unless its subject be the amateur standing of the competitor, in which case the Games Committee must report such protest within forty-eight hours to the Secretary of the A. A. U.

RULE 16.—*Track Measurement.* All distances run or walked shall be measured upon a line eighteen inches outward from the inner edge of the track, except that in races on straightaway tracks the distance shall be measured in a direct line from the starting mark to the finishing line.

RULE 17.—*The Course.* Each competitor shall keep in his respective position from start to finish in all races on straightaway tracks, and in all races on tracks with one or more turns he shall not cross to the inner edge of the track, except when he is at least six feet in advance of his nearest competitor.

The Referee shall disqualify from that event any competitor who wilfully pushes against, impedes, crosses the course of, or in any way interferes with another competitor.

The Referee shall disqualify from further participation in the games, any contestant competing to lose, to coach, or in any way impede the chances of another competitor either in a trial or final contest.

RULE 18.—*The Finish* of the course shall be represented by a line between two

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finishing posts, drawn across and at right angles to the sides of the track, and three feet above which line shall be placed a tape attached at either end to the finishing posts. A finish shall be counted when any part of the winner's body, except his hands or arms, shall touch the tape at the finish line. The tape is to be considered the finishing line for the winner, but the order of finishing across the track line shall determine the positions of the other competitors.

Men who engage in athletic sports for a money prize or for a portion of the gate receipts are termed professional athletes, and are not allowed to compete in amateur contests. The National Amateur Athletic Union has adopted the following definition of an Amateur:

"One who has not entered in an open competition; or for either a stake, public or admission money or entrance fee; or under a fictitious name; or has not competed with or against a professional for any prize or where admission fee is charged; or who has not instructed, pursued or assisted in the pursuit of athletic exercises as a means of livelihood, or for gain or any emolument; or whose membership of any Athletic Club of any kind was not brought about or does not continue, because of any mutual understanding, express or implied, whereby his becoming or continuing a member of such Club would be of any pecuniary benefit to him whatever, direct or indirect, and who shall in other and all respects conform to the rules and regulations of this organization, will be considered an Amateur."

An open competition is one in which any one who wishes may enter.

RUNNING BROAD JUMP.

In this game the take-off is the main point to be guarded. In a competition, unless the jumper secures a good take-off, the jump is worthless. It matters little whether he be in the best of condition; if the jolt is not properly reached all is wrong. It is necessary, therefore, to mark a starting point for the run which will fetch him to the jumping line exactly. This is a matter easily accomplished with the aid of a friend. Have him stand at the jolt and note where the foot strikes; should it strike six inches or two feet short of the line, then set the starting line six inches or two feet farther back. The jumper must run with all the speed at his command, without hesitation, and be confident that the take-off will be properly met. Plenty of practice will be required to get the necessary confidence. Some jumpers have two marks, which is a good idea; a starting mark at say 110 feet distant from the take-off, and the second about fifty feet further on. The latter serves as a sort of check. The knees should be quickly raised as high as possible when the jump is made; additional impetus is thus given. Care should be taken not to shorten the stride while running. The natural stride should prevail until the last two paces, when, if possible, it should be lengthened by a few inches. The natural result of this lengthening of the stride is to throw the body up, which means a few more inches gained in distance. Long striders are generally the best broad jumpers. Short striders, unless they have great speed, seldom excel at the game. As speed is an important factor in broad jumping, the jumper should constantly practise at sprinting. Hopping about five hundred times a day is an excellent method of strengthening the jumping leg. Cover about nine inches with each hop about seventy-five consecutive times, with a rest of a few minutes, and then the same thing over again until the desired number of times is reached. The jumper should never lose sight of the fact that it is important to rise as high as possible when jumping. During a competition, while awaiting his turn, he should carefully protect his legs from the cold air and exposure, keeping them thoroughly warm. It is impossible to jump well with cold and stiffened limbs.

NATIONAL AMATEUR ATHLETIC UNION JUMPING RULES.

SECTION 1. A fair jump shall be one that is made without the assistance of weights, diving, somersets, or hand springs of any kind.

In all handicap jumps the scratch man shall be entitled to try last.

SEC. 2. *The Running High Jump.* The Field Judges shall decide the height at which the jump shall commence, and shall regulate the succeeding elevations. Each competitor shall be allowed three trial jumps at each height, and if on the third trial he shall fail, he shall be declared out of the competition.

Competitors shall jump in order as placed in the programme; then those failing, if any, shall have their second trial jump in a like order, after which those having failed twice shall make their third trial jump.

The jump shall be made over a bar resting on pins projecting not more than three inches from the uprights, and when this bar is removed from its place it shall be counted as a trial jump.

Running under the bar in making an attempt to jump shall be counted as a "balk," and three successive "balks" shall be counted as a trial jump.

The distance of the run before the jump shall be unlimited.

A competitor may decline to jump at any height in his turn, and by so doing forfeits his right to again jump at the height declined.

SEC. 3. *The Standing High Jump.* The feet of the competitor may be placed in any position, but shall leave the ground only once in making an attempt to jump. When the feet are lifted from the ground twice, or two springs are made in making the attempt, it shall count as a trial jump without result.

With this exception the rules governing the Running High Jump shall govern the Standing High Jump.

SEC. 4. *The Running Broad Jump.* When jumped on earth, a joist five inches wide shall be sunk flush with it. The outer edge of this joist shall be called the scratch line, and the measurement of all jumps shall be made from it at right angles to the nearest break in the ground made by any part of the person of the competitor.

In front of the scratch line the ground shall be removed to the depth of three and the width of twelve inches outward.

A foul jump shall be one where the competitor in jumping off the scratch line makes a mark on the ground immediately in front of it, and shall count as a trial jump without result.

Each competitor shall have three trial jumps, and the best three shall each have three more trial jumps.

The competition shall be decided by the best of all the trial jumps of the competitors.

The distance of the run before the scratch line shall be unlimited.

SEC. 6. *The Standing Broad Jump.* The feet of the competitor may be placed in any position, but shall leave the ground only once in making an attempt to jump. When the feet are lifted from the ground twice, or two springs are made in making the attempt, it shall count as a trial jump without result.

In all other respects the rules governing the Running Broad Jump shall also govern the Standing Broad Jump.

SEC. 7. *The Three Standing Broad Jumps.* The feet of the competitor shall leave the ground only once in making an attempt for each of the three jumps, and no stoppage between jumps shall be allowed. In all other respects the rules governing the Standing Broad Jump shall also govern the Three Standing Broad Jumps.

SEC. 8. *Running Hop, Step, and Jump.* The competitor shall first land upon the same foot with which he shall have taken-off. The reverse foot shall be used for the second landing, and both feet shall be used for the third landing.

In all other respects the rules governing the Running Broad Jump shall also govern the Running Hop, Step, and Jump.

HURDLE RACING.

The hurdle races most popular are the 120-yards, with ten 3ft. 6in. hurdles, placed at 10-yard intervals, with 15 yards from the start to the first obstacle, and a like distance from the last obstacle to the finish; and the 220-yards with ten 2ft. 6in. hurdles, placed at 20-yard intervals, with like distances from the start to the first obstacle, and from the last obstacle to the finish.

The former race is the more popular with the spectators and the expert hurdler, while the latter is more in favor with the novice, but is seldom as interesting from the onlooker's point of view.

The hurdler, like the football player, must think and act quickly and be possessed of a fair amount of nerve and dash. "He who hesitates is lost," may be aptly applied to the hurdle racer.

In the 3ft. 6in. race the runner should dash at the first hurdle with all possible speed; no hesitation. At first the novice will hesitate and be overcareful. To overcome the tendency he should put up one hurdle at the proper distance, and, with a revolver starting, practise over a single hurdle about six or seven times every other day for about two weeks, or until he obliterates all traces of his hesitancy. He can now put up three or four more hurdles and practise over these four or five times a day on as many days during the week as his strength will permit, but never more than four or five times a week. A trial of the entire flight may be run once a week. After each day's practice he may run 120 yards on the flat, with a somewhat shortened and quickened stride in 15 seconds. If the spring is made off the right foot, turn the body slightly to the right while clearing the hurdle, and *vice versa*. He should abstain from going over the hurdle for at least three days before a race, so as to avoid the chance of getting sore. Long walks should be avoided.

RULES OF THE NATIONAL AMATEUR ATHLETIC UNION FOR HURDLE RACES.

Different heights, distances, and numbers of hurdles may be selected for hurdle races.

In the 120-yard hurdle race ten hurdles shall be used; each hurdle to be three feet six inches high. They shall be placed ten yards apart, with the first hurdle fifteen yards distance from the starting point, and the last hurdle fifteen yards before the finishing line. In the 220-yard hurdle race ten hurdles shall be used, each hurdle to be two feet six inches high. They shall be placed twenty yards apart, with the first hurdle twenty yards distant from the starting mark, and the last hurdle twenty yards before the finishing line.

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In hurdle races of other distances and with different numbers of hurdles, the hurdles shall be placed at equal intervals, with the same space between the first hurdle and the starting point and the last hurdle and the finishing line, as between each of the hurdles.

In making a record it shall be necessary for the competitor to jump over every hurdle in its proper position.

RULES OF THE NATIONAL AMATEUR ATHLETIC UNION FOR PUTTING THE SHOT.

The shot shall be a solid sphere, made of metal and weighing at least 16 or 24 pounds, as the event may call for.

It shall be put with one hand, and in making the attempt it shall be above and not behind the shoulder.

The competitor shall stand in a circle seven feet in diameter, on four feet of the circumference of which shall be placed a board four inches high, at which the competitor must stand when the shot leaves his hand.

A fair put shall be one where no part of the person of the competitor shall touch in front of the circle or on the board in making the attempt.

A put shall be counted as foul if the competitor steps over the front half of the circle or on the board, before the measurement of his put is made.

The measurement of all puts shall be made from the nearest mark made by the shot to a point on the circumference of the circle, on a line with the object mark and the centre of the circle.

Foul puts and letting go the shot in making an attempt shall be counted as trial puts without result.

A board similar to the one in front may be used at the back of the circle.

The order of competing and number of trials shall be the same as for the running broad jump. Shots shall be furnished by the Games Committee. Any contestant may use his private shot, if correct in weight and shape; in which case the other contestants must also be allowed to use it, if they wish.

THROWING THE WEIGHTS.

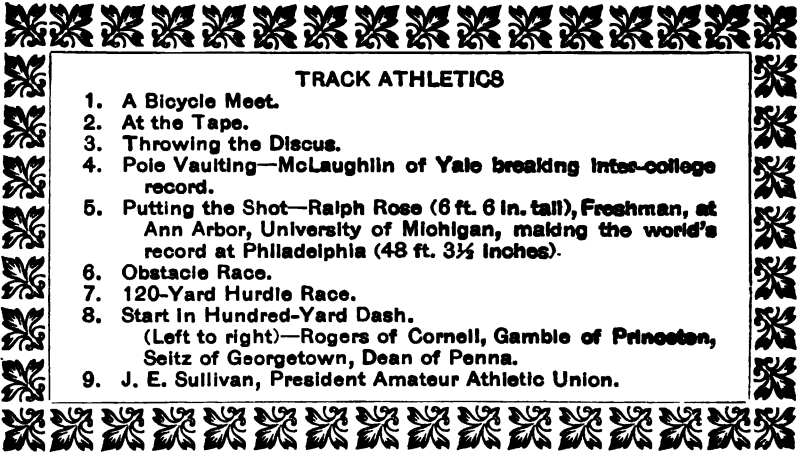
The main point to learn in throwing the hammer, is to get as much impetus as possible upon the body by rapidly spinning round, the arms being held perfectly rigid with the hammer grasped in the hands. When the greatest impetus is obtained the hammer is let go, an extra push being given at the last moment by a jerk of the whole body. No actual arm work is called for, the strain falling mainly upon the back and loins. The hammer is swung round, when once the thrower has begun his spin at right angles to the body, and in a vertical position, and the arm and handle thus act as one and the same lever. A very slight grasp of mechanical principles will show that the hammer head is as if were attached to the circumference of a revolving circle, the motive power being supplied by the spinning human body at the centre. At the moment of delivery the centrifugal force causes the hammer to fly off in a straight line. It follows that the hammer will fly furthest when the greatest momentum can be produced. It is, therefore, obvious that where run is allowed, the heaviest man, provided he can acquire enough skill to revolve rapidly without falling over, must inevitably be able to throw the hammer furthest; or, as an English trainer once pithily observed, "A good big 'un will always beat a good little 'un."

The advantage of this preparation, even to a man never destined to excel in high-class competition, will be found to repay lavishly the amount of time and trouble expended. The muscles called into play serve to draw the shoulders and ribs into a healthy and natural position, and to give the lungs and heart plenty of room to perform their vital functions. These organs are never slow to avail themselves of this rare indulgence and soon contribute conspicuously to the comfort and health of the general system. The back and loins, and, to a minor extent, the lower limbs, will be strengthened and developed.

In throwing the 56-pound weight a great deal of practice is required, and skill is not such an important factor. A strong, healthy man, with plenty of practice and careful coaching, can, no doubt, become proficient at this game.

The main point in putting the shot is to get one's "weight on," as rowing coaches express it; that is to say, to employ mere arm work as little as possible, getting the impetus for propulsion from a rapid spring and half turn of the body. The method adopted for securing this by all good weight putters may be gleaned from the following description: The putter stands at the back of the circle, holds the weight in his right hand (supposing him to be right-handed), and balances his body on his right leg. After having acquired his balance and limbered the muscles of his arm by stretching it to its full extent, he takes a quick hop to the centre of the circle; then, with a sharp spring, the right half of the body is brought sharply to the front, and arm and body shoot out in unison with the concentrated effort of the entire muscular system. A careful study of the most scientific performers must be made to render a written account intelligible to the novice, who should then be careful to use a light shot until he has thoroughly mastered the requisite motions.





TRACK ATHLETICS

1. A Bicycle Meet.
2. At the Tape.
3. Throwing the Discus.
4. Pole Vaulting—McLaughlin of Yale breaking inter-college record.
5. Putting the Shot—Ralph Rose (6 ft. 6 in. tall), Freshman, at Ann Arbor, University of Michigan, making the world's record at Philadelphia (48 ft. 3½ inches).
6. Obstacle Race.
7. 120-Yard Hurdle Race.
8. Start in Hundred-Yard Dash.
(Left to right)—Rogers of Cornell, Gamble of Princeton, Seitz of Georgetown, Dean of Penna.
9. J. E. Sullivan, President Amateur Athletic Union.

RULES OF THE AMATEUR UNION; THROWING THE HAMMER.

The hammer-head shall be a metal sphere. The handle shall be of wood, the length of handle and head combined shall be four feet, and the combined weight shall be at least sixteen pounds.

All throws shall be made from a circle, seven feet in diameter.

The competitor may assume any position he chooses in making an attempt. A fair throw shall be one when no part of the person of the competitor shall touch outside of the circle in making the attempt.

A throw shall be counted foul if the competitor steps over the front half of the circle before his throw is measured.

Foul throws and letting go of the hammer in an attempt, shall count as trial throws.

The measurement of all throws shall be made from the nearest mark made by the head of the hammer, to a point on the circumference of the circle, on a line with the object mark and the centre of the circle.

The order of competing and number of trials shall be the same as prescribed for the Running Broad Jump.

Hammers shall be furnished by the Games Committee. Any contestant may use his private hammer, if correct in weight and shape; in which case the other contestants must also be allowed to use it, if they wish.

The thrower, in some contests, is allowed to run as far as he pleases before throwing the hammer, so long as he does not cross the "scratch line" from which the measurement is made. Sometimes he is allowed to run a fixed distance, as seven feet, and sometimes he is permitted to turn around once before throwing. Some throwers hold the hammer in one hand, and some in both.

THE AMATEUR ATHLETIC UNION RULES FOR THROWING THE 56-LB. WEIGHT.

SECTION 1. The weight shall be a sphere made of metal, with a metal handle attached. Their combined weight shall be at least fifty-six pounds, and the combined height shall be sixteen inches, but no flexible attachment will be allowed.

All throws shall be made from a circle seven feet in diameter.

The competitor may assume any position he chooses in making an attempt.

Foul throws and letting go the weight in an attempt shall count as a trial throw without result.

The order of competing and number of trials shall be the same as laid down for the jumping contests.

SEC. 2. In Throwing for Distance. A fair throw shall be one where no part of the person of the competitor shall touch in front of the circle in making an attempt.

A throw shall be counted foul if the competitor steps over the front half of the circle before his throw is measured.

The measurement of all throws shall be made from the nearest mark made by the sphere of the weight, to a point on the circumference of the circle, on a line with the object mark and the centre of the circle.

SEC. 3. In Throwing for Height, a barrel-head three feet in diameter shall be suspended in the air.

A fair throw shall be one where no part of the person of the competitor shall touch in front of the circle in making an attempt, and where any part of the weight or handle touches any part of the barrel-head.

A foul throw shall be one where the competitor touches outside the circle before letting go the weight.

The measurement of all throws shall be from a point on the ground drawn directly under and parallel to the lowest point of the barrel-head.

The order of competing and number of trials shall be the same as for the running broad jump. Weights shall be furnished by the Games Committee. Any contestant may use his private weight, if correct in weight and shape; in which case the other contestants must also be allowed to use it, if they wish.

POLE VAULTING.

This is a game which requires a strong pair of arms as well as a strong pair of nether limbs. As in the broad jump, a starting mark should be used, but the run need not be more than 75 or 80 feet. Speed is an important factor in this game, as in the running jump.

Two of the commonest faults to be found with the pole vaulter are, first, the take-off foot is brought too close to the point of the pole in the ground: this prevents attaining the swing necessary to carry the jumper over; second, the arms are not used in raising the body, which should be done immediately on leaving the ground. Both these faults can easily be remedied, but either is fatal. The faster the run to the bar, the more the impetus obtained. When clearing the bar the body should be turned so as to face the bar when the ground is reached.

In taking hold of the pole, the upper hand should be at a point about twelve inches below the height to be cleared, the lower hand from 2ft. to 2ft. 6in. under the upper,

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The vaulter should grasp the pole as he would a rope in climbing upward; the thumbs pointing upward.

The arms can be strengthened by all-round work on the horizontal bar. Another method is to hang a rope over the inside corner of a door, or on a hook in the wall; raise and lower the body by the arms, allowing the heels to remain on the floor.

As in the broad jump, the speed and strength in the jumping leg should be developed, which can be accomplished by following the suggestions contained in running broad jump.

NATIONAL AMATEUR ATHLETIC UNION RULES FOR BICYCLE RACING.

Records. The standard table of recognized records shall be 1-4, 1-3, 1-2, 2-3, 3-4, 1 mile, and all even miles upward, no intermediate distances.

Records against time may be made at an open meeting, or in private, and with or without pacemakers.

The Board will consider flying-start only in records against time; standing-start only in competition records.

A competition record must be made in a race between men.

Records made with the assistance of other than recognized cycling machines, propelled by man power, will be recorded separately.

In unpaced events, or during unpaced record trials, there shall be no pacing devices, and only the rider making the trial shall be on the track.

Tracks. Tracks shall be measured on a line drawn eighteen inches out from a well-defined, fixed, and continuous inner curb or pole; no record shall be allowed on a track otherwise measured.

Machines Excluded. The Board reserves the right to exclude from the racing path any and all machines which, in its judgment, do not come within the commonly accepted meaning of the term "bicycle," either by peculiarity of construction or by undoubted mechanical advantages which they may possess.

Road Racing. The League of American Wheelmen regards racing on the public highways as an unlawful practice, and refuses to recognize and legislate for such form of the sport except to forbid the competing together therein or pace-making one for the other, of amateurs and professionals.

Should any part of a road race be run upon the track, such part immediately becomes subject to track rules.

TRACK RULES.

Officials; their Powers and Duties. The officers of all race meetings and cycling events shall be a referee, who must be an amateur wheelman, three judges at the finish, three timekeepers, one starter, one scorer, one clerk of the course, with assistants if necessary, and one umpire for each turn of the track, or more, at option of the referee. The referee, judges, and clerk of the course shall constitute the Executive Board.

The referee shall have general supervision of the race meeting. He shall give judgment on protests received by him, shall decide all questions or objections respecting foul riding or offences which he may be personally cognizant of, or which may be brought to his attention by an umpire or other officer.

The judges shall decide the positions of the men at the finish. In case of disagreement the majority shall decide.

The timekeepers shall compare watches before the races are started, and shall note any variance; they shall each time every event, and in case of disagreement the intermediate time of the three watches shall be the official time. Time shall be taken from the flash of a pistol. In case two watches of the three mark the same time, that shall be the official time.

The scorer shall record the laps made by each competitor, the order of the men at the finish as given him by the judges, and the time as given him by the timekeepers. He should indicate the commencement of the last lap by ringing a bell as the riders pass over the tape for the final lap, but the riders must keep count of the laps for themselves.

It shall be the duty of the starter, when it has been reported to him by the clerk of the course that all the competitors are ready, to see that the timekeepers are warned, and before starting the men, to say, "Mount"; in a few seconds after to say, "Are the timers ready? Are the starters ready?" and, if no reply to the contrary be given, to effect a start by a report of a pistol. Should the pistol miss fire, the start may be made by the word "Go." The starter shall announce to the competitors the distance which they are to ride. The starter may at his discretion, put back for a distance any competitor starting before the signal is given. In case of a false start, the competitors shall be called back by the starter by the ringing of a bell or pistol fire and restarted.

In case of a fall or accident within thirty feet of the scratch line, the contestants shall be recalled by the starter by the ringing of a bell or pistol fire, and the race started over again.

The clerk of the course shall call competitors in ample time for each event, and see that they are provided with numbers properly worn. He shall report the contestants to the scorers, see that they are on their appointed marks, and call the numbers for the scorers as they cross the line at the end of each lap.

It shall be the duty of the umpire to stand at such part of the field as the referee may direct, to watch closely the riding, and immediately after each race to report to the referee any unfair riding he may see.

Positions. The drawing for position in each event shall be done by the promoters of the meeting, and the positions of the men shall appear on the programme. When it becomes necessary to draw for positions on the grounds, the work shall be done by the clerk and starter in conjunction. In heat races the winner of a heat shall take the pole (or inside position) the succeeding heat, and the other riders shall take their positions in the order assigned them in judging the last preceding heat. When two or more riders make a dead heat, they shall start for the succeeding heat in the same positions with reference to the pole that they occupied at the finish of the dead heat.

When races are run in heats and a final, the winner of the fastest heat shall take the pole in the final, the winner of the second fastest heat the next position, and so on. If more than one qualifies for the final from each heat, the second man in fastest heat shall be next outside the winner of slowest heat, and so on. Only the winners of positions in the trial heats, as stipulated by the terms of the race, shall compete in the final.

No one shall be allowed in a final because of a foul or an accident in a trial heat.

Should two or more riders make a dead heat of any qualifying place in a trial heat, they shall both be allowed to enter the final heat, except in the National Championship. Should two or more riders make a dead heat of any final, or a dead heat for second or any lower place for which there is a prize, they may decide by lot who shall take the prize, or may again ride the distance to decide the race, at the discretion of the referee.

Starts. All starts shall be from the inside of the track, and, except in a flying-start event, shall be from a standstill, with the left hand toward the curb, and the machines shall be held in position by an attendant (the front wheel touching the starting line) until the signal is given by starter. Attendants, when pushing off competitors, must keep behind the mark from which the competitors actually start. Should any part of the attendant touch the track in front of the mark, the competitor may be disqualified. Unless excused by the referee, every rider who enters in a handicap race must start in same.

Finish. The finish of all races shall be judged by the first part of the front wheel which touches the tape fastened flat on the ground at the winning post, and no rider shall be allowed a finishing position who abandons the track and afterward returns and crosses the tape.

Riding. Riders shall pass on the outside (unless the man passed be dismounted), and must be at least a clear length of the cycle in front before taking the inside, but on entering the homestretch in the last lap of a race, the foremost rider or riders must keep to that part of the track first selected; and the hindmost rider or riders, when there is sufficient room to pass on the inside or anywhere on the homestretch without interfering with others, shall be allowed to do so. A rider shall not change from the inner to the outside of the track during any part of a race when another rider is so near that in altering his position he interferes with or impedes the progress of the rider. No rider shall touch another.

No rider during a race shall turn his head to look backward, remove his hands from the handle-bars, or otherwise ride in a careless or unskilful manner, thereby imperilling the safety of other riders.

Competitors may dismount during a race at their pleasure, and may run with their cycles if they wish to, but they must keep to the extreme outside of the path whenever dismounted. If a rider be dismounted by accident, or to change his machine, an attendant may hold his machine while he mounts it, and he shall so mount at the extreme outside of the path.

Time Limits. The referee may place a time limit on any race except handicap, team, and lap races. The time limit shall not be announced to the contestants until their arrival at the tape, preparatory to the start of the race. If the competitors finish within the limit, they shall receive the prizes. If they fail to so finish, and the referee is convinced by their riding and the time that they endeavored to reach the limit, he may award the prizes.

Pacemaking. A general pacemaker may be put in any race by the race promoter, having previously notified the referee of the fact. He shall assist no single rider, but shall act to increase the speed of the race in general. He shall, if a single rider only, be entitled to any place or prize he may win, if he starts from the scratch, or may be rewarded by a special prize, within the limits of the class.

Tandems or pacing machines carrying more than two riders, may be put in to pace competitions only by written consent of the members of the Racing Board in charge of the district.

Track Privileges and Decorum. No person whosoever shall be allowed inside the track except the officials of the meet. The handicappers of the meet shall at all times, however, have track privileges. Authorized persons shall wear a badge. Competitors or pacemakers not engaged in a race actually taking place shall not be allowed inside or on the track. No one shall be allowed to "coach" competitors on the track. No shouting or remarks by trainers or attendants to encourage certain riders or disconcert others shall be permitted.

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Choice of Machines and Costumes. Choice or change of machine and choice of costume shall not be limited except that shirt shall not bare shoulders, and breeches must reach to the knees.

In races distinctly stated on the programme of events to be for a particular class of machine, this rule shall not apply so far as choice and change of machine are concerned. Safety bicycle races shall be limited to machines whose driving wheel does not exceed thirty-six inches in diameter.

Competitors to Wear Numbers. Every competitor shall receive in the dressing-room a number corresponding with his number on the programme, which must be worn on his back or right shoulder during the race. He shall inform himself of the times at which he must compete, and wait the call of the clerk in the dressing-room.

Definition of Races. A novice race is open only to those who have never won a prize in a track race, and shall be the first race of the meet. A novice race is a class race.

A class race is only open to those who, up to date of the closing of the entries, have not won the first position in a track race or trial heat in the same or better time than the class under consideration. In all class races the time limit shall be the time of the class. If the competitors fail to finish within the limit, and it is a good day, good track, and there are pacemakers, the referee shall declare no race. If they fail to finish in the time limit, and there are no pacemakers, or it is not (in the judgment of the referee) a good day, or it is not a good track, and the referee is convinced by their riding that they endeavored to reach the limit, and were not able to do so because of the absence of any one or all three conditions, he may award the prizes.

In a lap race the position of the first three men shall be taken at the finish of every lap. The first man shall score three points, the second man shall score two points, and the third man shall score one point, and no others shall score. The contestant who crosses the line first at the finish shall, for that lap, score four points. The competitor who scores the greatest number of points shall be declared the winner, but any contestant, in order to secure a prize, must ride the entire distance and be within 150 yards of the finish when the first man crosses the tape at the end of the last lap. The 150-yard mark must be marked by a flag.

In a team race the positions of all the riders starting shall be taken at the end of the race.

The first man shall count a number of points equal to the number of men starting, the second one less, and so on.

The team scoring the greatest number of points shall be declared the winner. A team shall be limited to three riders, each of whom shall have been a member of the club entering the team for at least three months previous to date of event. Each team member must also have resided within five miles of the city or town where the club has its headquarters for at least six months previous to the date of contest.

In a heat race the position of each rider must be taken at the finish of each heat. The first man shall count a number equal to that of the contestants in the first heat, the second man shall count one less, the third two less, and so on. The competitor who scores the greatest number of points shall be declared the winner. Or, as an alternative, which must be stated in the programme as rule or alternative, in running a heat race, such event may be conducted under the rule outlined below:

When the race is best two out of three heats, the winner is not reached until one rider has won two heats, either through virtue of finishing first or by the disqualification of a competitor or competitors who may finish in front and lose such position or positions through ruling or rulings of the referee. The second and other prizes shall be distributed according to the standing of the rider in the summary, heat winners to be placed before all those who have occupied lesser positions, and in case two riders are tied by finishing an equal number of times in the same position, the one occupying the best position in the concluding heat shall be awarded the prize. In every heat a rider must finish within 150 yards of the winner or be adjudged distanced. In case a rider fails to win one heat in three, he will be disqualified from any subsequent heats that may be necessary to decide the prizes.

Entries in a consolation race shall be limited to those who have not won a prize in any event of the meeting; provided, however, if only a single prize is given in the team race, members of the winning team shall not be considered to have won a prize and shall be eligible to the consolation race.

In a pursuit race the conditions must be printed on the programme or announced to the spectators.

In a handicap race the marks must be printed on the programme, and the men must start from the marks assigned by the handicapper in trial heats and finals.

In middle-distance races (10 to 100 miles) the terms and conditions must be printed on the programme.

Ignorance of Rules No Excuse. Ignorance of any of the foregoing rules will not be considered a valid excuse for violation.

TRAPPING AND TAXIDERMY.

Every one who camps out has more or less desire to gratify the instinct for hunting and many wish to preserve the trophies of their skill. The best traps to catch dangerous animals or those which are sought for their fur only, are the ordinary steel traps, which are made of various sizes and can be bought at most hardware stores. Another murderous trap is the figure-four trap, which every boy knows how to make. Traps for catching animals alive by means of bait and a swinging door opening only inward, are made of wire and wood and may be easily constructed by the ingenious.

TAXIDERMY.

1. Skinning and Preparing.

Taxidermy is the art of arranging or manipulating the skins of animals; practically, the removal and preservation of skins, which are either placed, unmounted, in cabinets, for examination and study, or subjected to the more complex arrangement of stuffing, mounting, and adjusting, to counterfeited as near as possible nature's likeness, and to express the characteristic habits of the individual.

Taxidermy calls for peculiar abilities. To be eminent in the art one must possess such faculties as will naturally place him higher. He must have the artistic faculty. It is not enough that he perform the simple mechanical manipulations: there are higher possibilities. An eye for modelling is requisite. After the skin is preserved and ready for mounting, the more the operator is possessed of the faculty that makes the sculptor, the nearer he will succeed in modelling skins that express the characteristic habits of position.

It is quite within the reach of the amateur operator to become skilled in the various manipulations required, and an ordinary amount of mechanical ability will prove sufficient for very pleasing results. Select a large bird or small quadruped for practice—a hen, we will say. The tools required are readily suggested and easily procured. Any convenient knife, something after the shape of a paper-cutter or scalpel; a pair of stout, short-bladed shears; a lighter pair; forceps, which are exactly like those used by surgeons for dissecting; and a longer pair, with handles. One might add to them a large skinning-knife, a pair of tow pliers, and a large and a small file.

Having the bird in hand, proceed to plug with cotton all holes made by shot, and the natural openings, to prevent blood or injecta from soiling the plumage. In the field, when specimens are reserved for mounting, they should be placed in a cone of paper, head downward, the tail being nearly covered by folding a portion over it.—We now place the bird upon the table, and separate the feathers, when they are sparsely set, in a line with the breast-bone. Make an incision through the skin only; have at hand a dish of oatmeal or plaster of Paris to apply freely to grease or blood, that the feathers may not be soiled. The edges of the incision are apt to curl inwards; by treating them thoroughly with the meal they will not do this.

The incision having been completed from the lower end of the breast-bone to the vent, careful manipulation with the forceps and fingers, and at times with the back of the knife, will suffice to remove the skin on both sides as low down as convenient. Place the thumb and forefinger of your right hand over the skin of the breast, press downward, and you will expose the whole breast to the neck. Now thrust a stout hook through the breast, beneath the "merry-thought," or in any position to sustain a strong pull; suspend the hooked body from above, as you can then the more conveniently handle it. Now sever the neck. Lay hold of a wing, pushing down, at the same time opening a place under the wing by aid of your fingers, in which place your scissors, and cut off at the shoulder.

Having cut off both wings, much care is requisite in separating the skin from the back. Here is the most delicate work; use great care as the loins are reached. Now take hold of a leg at the lower joint and press the skin down carefully with the fingers; insert the scissors at the joint (the knees, properly), and sever.

Carefully force down the skin to the base of the tail and cut off; the oil sac and adhering flesh should be removed also. The legs may now be stripped of all flesh and fat—indeed, all fat should be carefully left on all parts of the body, so that the skin may be as free as possible from it. The wings may now be stripped, care being taken to use the fingers in forcing down the skin. Remove the flesh from the bones of the wings and legs. Do not separate the shafts of the feathers—which are now seen adhering to the bone. In large birds the wing may be conveniently opened from the outside; an incision made on the under side will allow room to remove the flesh.

Having now removed the body, and properly cleaned the wing and leg bones, we may very easily strip the skin down from the neck. Before doing this,

Introduce the hook into the severed end of the neck, and suspend the skin, head downward, from above. The skin will leave the neck very readily, but as soon as the skull is reached manoeuvre carefully. Patient manipulating with the fingers will remove the skin from nearly all birds' heads. Owls and a few other birds will require a slit made in the neck at this point, which may be sewed up before the skin is turned. The ear openings are first encountered; the membrane which covers them should be carefully pushed off the skull by the finger-nail, or a blunt stick; little cutting is required. Then the eyes: carefully push the skin away until the eye-socket is completely exposed. The membrane which holds the skin in place around the eyes should be separated so skillfully as to leave the eyelids of the skin perfect in their borders. Push the skin farther down towards the bill, and then remove the eyes and all flesh that can be separated from the skull. Continuing the skinning to the base of the bill, the under jaw should be denuded of its flesh; the tongue and all soft parts in this region removed. The base of the skull should now be cut through, removing a part of the roof of the mouth; the brain is now entirely removed, and all other soft parts.

The preserving process is now in order. Have a wide-mouthed bottle of pure arsenic, which should be plainly labelled POISON!—and kept securely stopped, and away from all other articles. With a common painter's "sash tool," or brush apply the dry arsenic freely to every fleshy part that can be reached. Begin with the head. Apply the arsenic to the eye-sockets very freely, to the interior of the skull, and then fill these parts with cotton. The mouth and jaws will require a thorough poisoning. Apply the poison freely to every other part, working it well into the wing portions and into the legs. Arsenic is not deleterious, used in a proper manner; it is deadly poison taken into the stomach. The worst that happens to those who use great quantities, or handle it with abraded or cut hands, is a slight soreness in the more tender parts, as under the nails; this is avoided very considerably by oiling the hands, or washing them in glycerine. The arsenic soaps are prized by some, but we much prefer the dry powder, as being more convenient and more efficient.

The legs of the bird and the bill should be varnished, to preserve them from the attacks of insects.

The skin is now ready to turn into its proper shape, when the feathers must be smoothed into place, and if the skin is to be only used for examination or study, it may be filled out with cotton. Before this is done the wing bones should be tied, on the inside, to each other, leaving a space between the ends of about an inch—or sufficient to allow the wings to assume a natural position. The leg bones should be wrapped with cotton. To make a neat cabinet specimen, a piece of pine wood is wrapped with tow or cotton, and the upper end passed on to the skull; the lower end projects a little to allow the specimen to be handled without disturbing the plumage. The skin is now neatly brought into shape and sewed.

White feathers that are soiled may be cleansed by washing in soap and water, and repeatedly dried off by sprinkling with plaster of Paris.

To skin and preserve a quadruped the processes are so similar that any one having sufficient skill to do the one may successfully cope with the other.

Our specimen is now nearly filled with a temporary body, the skin having been thoroughly poisoned and preserved, and made pretty sure proof against the attack of insects, and not subject to decomposition; this indefinitely, if proper manipulation is observed.

In this condition it is useful for study, and is in the required state for the cabinet. Should the specimen, however, at any time, be selected to "set up," it will be necessary to further prosecute the study from one of the manuals on the subject.

II. *Insect Taxidermy.*

At the Museum of Natural History one may see beautiful work of this kind, each species of insect being illustrated by a prepared specimen of the various phases in which it appears, from the egg to the perfect form. The plant on which the insect feeds is arranged with the specimens, together with the nest that each makes. The worms are emptied of their contents and preserved with much care, showing the various stages; many of them are of brilliant colors, and retain a very natural appearance. The cocoons and the silken or other products are also shown. In some instances spiders' nests prove to be made up of tough and beautiful silk.

The art is within the reach of the young amateur, and a tolerable exercise of ingenuity will produce very interesting results. The principal manipulation is with the worms or larvae. You wish to preserve, for example, one of the great green worms that you find eating your grape-vine. Make an incision across the posterior portion, just sufficient to include the end of the alimentary canal; press the contents of the worm out through the opening, gently, and with special care in the case of the worms that have hairy or other appendages. Though seemingly a hazardous thing to do (as respects the integrity of the specimen), the most delicate hairy caterpillars may be very successfully emptied of their contents. Indeed, they are by this process so cleaned internally that, practically, they are skinned, and you have the skin only now to deal with.

Select a good straw, of size proportioned to the specimen; this is to be used as a blow pipe, and should, therefore, be a whole one, and several inches in length.

Introduce the straw carefully within the cut end of the worm, and tie the end around the straw with fine silk. If the operation of squeezing has been successful, it remains to inflate the body for preservation. Prepare a dish of live embers, and over these hold the specimen—using great care in the degree of heat applied. While holding the worm in this way, keep it inflated. The form which the insect is to assume for the cabinet should be considered while this drying process is going on. Some light wooden frame, such as will be readily suggested to the operator, will often be of service to hold the specimen in the proper position. Some worms may require to be curved, or put into a shape characteristic of them while living. Attention to these points will contribute greatly to the value and pleasing appearance of the specimen. The straw, after the drying, is cut off near the body, as it is convenient to allow a small portion to project outside, so that the specimen may be pinned to the cabinet through it, thus avoiding the injury that results from passing the pin through the body.

The specimen is now complete, unless we choose to adopt some method of poisoning it. Corrosive sublimate, which is sometimes used, is likely to injure the colors. A strong arsenical solution may be applied with a brush, safely, as regards the colors. Caterpillars prepared in this manner preserve their color and form nearly perfect, the hairs and other appendages retaining a remarkably natural appearance, which, of course, enhances greatly the beauty and usefulness of an entomological cabinet.

An extended field is open to any one who may practise this branch of taxidermy.

WRESTLING.

BY

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IN the judgment of a large number of athletes wrestling is considered superior to any other form of exercise, by reason of the intense personal antagonism in which one man is pitted against another man. Dr. J. K. Shell, a recognized authority on wrestling, says, "That a man's muscle, brawn, endurance, perception, co-ordination, reasoning and quick adaptability are in direct opposition to similar functions and attributes of his antagonist." In wrestling more than in any other exercise, we have the pushing of weight against weight—the lifting of a live resisting weight; the continually applied *positive* forces and continuous *negative* resistance thus bringing into action almost every known muscle.

The desire to engage in wrestling seems to be instinctive in healthy men and boys. As an exercise it is an ideal one, with the constantly changing positions; the meeting of complex situations *instantly* thus developing a quickness of hand and eye, keeping a man ever upon the alert; speed and accuracy of movement as well as the ability to relax as the occasion allows or demands. Wrestling as well as boxing is a practical system of self-defence, cultivating both courage and self-reliance. Moreover, the heart and lungs as well as the abdominal organs receive great benefit by the very active movements in wrestling. Whereas, sparring and fencing may seemingly be quicker games, depending upon sight, quick control, and co-ordination, yet both of these games are in a measure one-sided and unsymmetrical. There is much to commend in all these exercises, boxing, fencing, and wrestling, yet the latter seems to develop a man better than boxing,

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and it certainly makes him stronger. J. Leonard Mason, one of the best wrestlers in our colleges, says: "If I had to choose between the three exercises I would not hesitate to choose wrestling as having the most good points and the fewest objectionable ones, making it the most valuable exercise for the average man in our gymnasiums."

WRESTLING RULES.

Collar and Elbow.

1. The men shall wear short coats or jackets made of canvas, not extending below the hips, with strong collar and elbow, suitable for the grasp of an opponent. They shall wear rubber sandals on the feet.
2. Each man shall take hold of the collar of his opponent with his right hand, while with the left hand he must take hold of the right elbow.
3. Both men shall stand up breast and breast, with limber arms, and show fair and equal play with the feet.
4. Either man breaking his hold with one or both hands, to save himself from a fall, shall forfeit said fall.
5. All falls must be square back falls; either two hips and one shoulder or two shoulders and one hip to be on the carpet simultaneously, to constitute a fall.
6. Striking upon the face, side, or knees is no fall, and nothing shall be allowed for forcing a man from such positions to his back. Going down on one or both knees is fair, as long as no holds are broken.
7. A rest of at least ten and not more than twenty minutes shall be allowed between each fall.
8. The first fall, best two in three or three in five, shall win, according to mutual agreement.
9. The ring shall be twenty-four feet square, and nobody shall be allowed inside except the referee and two umpires.

Catch as Catch Can.

1. The contestants can take any hold, trip, or lock they please.
2. To constitute a fall, two shoulders must strike the floor simultaneously.
3. Long or short drawers must be worn, and nothing heavier for the feet will be allowed than socks and thin slippers.
4. A rest of at least ten and not more than twenty minutes shall be allowed between each fall.
5. The umpires shall take their positions at a proper distance from the contestants, and there remain, and will not be allowed to talk to or advise the principals during the contest. They shall however have the right to call the attention of the referee to any point which, in their judgment, may require his decision.
6. Doing anything to injure an opponent shall be considered foul. For each violation of this rule the offender shall be deemed to have lost a fall, and the referee shall have the power to award the match to the injured party.

Greco-Roman.

1. Wrestlers are allowed to take hold anywhere between the head and the belt or waist. Grasping the legs is strictly forbidden.
2. The men shall use open hands, and are not allowed to strike or scratch, to clasp one of their own hands within the other, nor interlace their fingers; but they can grasp their own wrists, to tighten their hold around their opponent's body or otherwise.
3. The principals shall have their finger-nails and hair cut short, and must wrestle either barefooted or in their socks.
4. Should a wrestler fall on his knee, shoulder, or side, a new start must be made.
5. Should the principals roll over each other, the one whose shoulder shall touch the ground first is deemed conquered.
6. A rest of not less than ten nor more than twenty-five minutes shall be allowed between each bout.
7. Two shoulders touching the ground simultaneously constitutes a fall.

HELP IN CASE OF ACCIDENTS.

Drowning.—(1) Loosen clothing, if any. (2) Empty lungs of water by laying body on its stomach and lifting it by the middle so that the head hangs down. Jerk the body a few times. (3) Pull tongue forward, using handkerchief, or pin with string, if necessary. (4) Imitate motion of respiration by alternately compressing and expanding the lower ribs, about twenty times a minute. Alternately raising and lowering the arms from the sides up above the head will stimulate the action of the lungs. Let it be done gently but persistently.

(5) Apply warmth and friction to extremities. (6) By holding tongue forward, closing the nostrils and pressing the "Adam's apple" back (so as to close the entrance to stomach), direct inflation may be tried. Take a deep breath and breathe it forcibly into the mouth of patient, compress the chest to expel the air, and repeat the operation. (7) *Don't give up!* People have been saved after hours of patient, vigorous effort. (8) When breathing begins, get patient into a warm bed, give warm drinks, or spirits in teaspoonfuls, fresh air, and quiet.

Burns and Scalds.—Cover with cooking soda, and lay wet cloths over it. Whites of eggs and olive oil. Olive or linseed oil, plain, or mixed with chalk or whiting.

Lightning.—Dash cold water over the person struck.

Sunstroke.—Loosen clothing. Get patient into shade, and apply ice-cold water to head.

Mad Dog or Snake Bite.—Tie cord tight above wound. Suck the wound and cauterize with caustic or white-hot iron at once, or cut out adjoining parts with a sharp knife.

Venomous Insects' Stings, etc.—Apply weak ammonia, oil, salt water, or iodine.

Fainting.—Place flat on back; allow fresh air and sprinkle with water.

Tests of Death.—Hold mirror to mouth. If living, moisture will gather. Push pin into flesh. If dead, the hole will remain; if alive, it will close up.

Cinders in the Eye.—Roll soft paper up like a lamp lighter, and wet the tip to remove, or use a medicine dropper to draw it out. Rub the other eye.

Fire in One's Clothing.—*Don't run,*—especially not downstairs or out of doors. Roll on carpet, or wrap in woollen rug or blanket. Keep the head down, so as not to inhale flame.

Fire in a Building.—Crawl on the floor. The clearest air is the lowest in the room. Cover the head with a woollen wrap, wet if possible. Cut holes for the eyes. Don't get excited.

Fire in Kerosene.—*Don't use water,* it will spread the flames. Dirt, sand, or flour is the best extinguisher; or smother with a woollen rug, tablecloth, or carpet.

FIRST AID TO THE UNCONSCIOUS.

NOTE.—The distinguishing expression of intoxication is the fast pulse as compared with the slow pulse of sunstroke, concussion, and apoplexy.

Send for a physician at once and apply the treatment given below until he comes.

Under each heading in the top line is given the symptom expressed for the causes in the first column. It will be noted that each cause of unconsciousness has some peculiar expression that distinguishes it from others, while other expressions may be alike for several causes. As, for instance, inequality of eyes and motion for apoplexy—full, fast pulse for intoxication, etc. These peculiar expressions should be looked for before deciding on any cause, as what might be taken for a case of intoxication may be sunstroke, requiring prompt and skilful treatment.

This diagram was arranged by Dr. G. T. Swartz, R. I. State Registrar and Secretary State Board of Health, for First Aid Classes.

DIAGRAM FOR FIRST AID TO THE UNCONSCIOUS.						
	FACE	EYES	MOUTH	RESPIRATION	PULSE	MOTION
CONCUSSION COMPRESSION APOPLEXY	FLUSHED	UNEQUAL TO LIGHT & TIGHT & IN SIZE	TO ONE SIDE	SNORTING	VERY FULL SLOW	ONE SIDED
INTOXICATION	FLUSHED	ALIKE NORMAL	—	DEEP	FULL FAST	PRESENT
SUNSTROKE	FLUSHED	ALIKE	—	DEEP	FULL SLOW	PRESENT
EPILEPSY	PALE	ALIKE NORMAL	TWITCHING	IRREGULAR	NORMAL	RIGID
FAINING	PALE	ALIKE	—	SHALLOW	WEAK	MORE OR LESS PRESENT
OPIUM POISONING	OFTEN PALE	LIKE PIN HEADS	—	DEEP	SLOW	MORE OR LESS PRESENT

Brain Concussion, Compression, or Apoplexy.—Lay the patient down, head slightly raised, loosen clothing, keep the head cool and feet warm. Keep quiet and don't give stimulants.

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Intoxication.—Give an emetic. If the skin is cold and pulse feeble, apply heat and friction.

Sunstroke.—Lay down in shade. Apply continuously ice or cold to the entire surface of the body. Ice pack behind ears and about head.

Epilepsy.—Lay the person down and keep him from injuring himself.

Fainting.—Lay down with head lower than body—apply smelling salts to nose and sprinkle cold water on face.

Opium Poisoning.—Empty the stomach. Keep the patient walking, slapping with a towel. Keep him awake.

Lightning, or Electric Shock.—treat as in resuscitation for drowning.

Venomous Insect Stings.—Alcoholic solution of menthol.

WHAT EXERCISE WILL DO FOR THE BODY

By MARY TAYLOR BISSELL, M. D.

When we ask what exercise can do for the human body we put into the word exercise a very definite meaning. We do not mean for instance the occasional walk that a girl may take on the beach, or the single riding or fencing or gymnasium lesson that she takes once or twice a month. The meaning of the word involves the idea of repeated practice,—something, whatever it may be, that we do once and again and again, possibly for pleasure only, but generally with the additional idea of perfecting ourselves in the practice. And it is only when these muscular movements are repeated and practiced that we can dignify them by the name of exercise, or demand of them any results, either in skill or strength or agility or general bodily vigor. So we shall be understood here as speaking of the regular practice of muscular movements in some fashion or another, and muscular movements which, either through design or accident, bring into play a large part of the body, and do it systematically; for the need of repetition is as necessary in educating the body as in training the mind. If we want to impress anything upon the brain, that thing has got to be repeated until the impression has sunk in; and if you want to make any definite impression upon these thousands of muscle fibres and train the coördinating power of all these nerve centres, and improve the conformation of the skeleton, and develop the capacity of all the organs, you will have to keep at it until the physical impression lightly made today, repeated tomorrow, has at last become an indelible memory, and the habit of the body. "What can you promise that systematic exercise will do for me?" ask a young girl of fifteen, seeking for some definite answer as to results. Well, it will simply make you more of a woman in every sense than you could possibly be without it. It will do this by improving every organ you use in movement; it will supple all your joints so that grace and ease will belong to them; it will make fatigue less frequent, and breathlessness uncommon; it will give you a bigger chest and more supple limbs and some force in your arms: it will clear away the fog in your brain, and the dyspepsia in your stomach, and bring you a rose for your cheek; and when your example has been followed by the

girls of one or two or more generations, it will give the world an idea what a noble creation a physically developed woman can be. Only it must be genuine exercise, and it must be systematic, otherwise the body will forget its cunning, and the lesson will not have been learned.

The way that exercise can actually change the structures of the body, so that they will be different not only as to power, but to touch and appearance and intimate constitution, is well seen in an exercised muscle.

A muscle that is exercised has evidently been profoundly changed in its qualities,—its fibres have become firmer and harder; it has lost its superfluous fat; it is evidently less liable to fatigue than before its training; it does not suffer the pains common to unused muscles after exertion. It has become, in fact, not only a more enduring instrument, but one much more competent to execute our pleasure; it is swifter and more graceful because more exact in its execution of our commands. Exactly what has gone on in its interior we do not see, but we know by certain experiments that by its exertions it has helped to throw off waste products in the body, burning them up by its internal heat, and so helping to free the body of these hindrances, and that its activity has also quickened the circulation and the respiration, so that heart and lungs are engaged simultaneously in eliminating worn-out material and bringing new to refresh the body.

The feeling of fatigue from which delicate persons suffer greatly, after even slight exertion, is probably better endured by one who exercises constantly, because, among other reasons, the nerve which supplies the muscle has become hardened by the repeated contractions of the muscle, so that its covering is rendered more resistant to pressure, and it becomes less sensitive to the buffetings of the muscle-bed in which it lies.

Since we see this process of improvement gradually going on in an external muscle under exercise, there is no reason why we should doubt that the same results are brought about in the internal organs and structures that we have learned are largely composed of muscle; and experience shows us that exercise does actually strengthen the muscle of the heart so that its contractions become more energetic with its increasing firmness of fibre, and it performs its work more vigorously, and at the same time more easily, than when it was less strong.

A soft and flabby heart muscle, such as sometimes occur after a long illness, is indeed in no better condition to work wisely than is the rest of a convalescent's body, which is trembling with weakness, and unable to direct its steps. The nerves that should control such a heart are evidently sharers in its weakness, and so are unable to guide it with a steady hand. Tonics and nutrition are what these convalescents need for the body in general; and for girls as well as for their elders, exercise is the tonic that the heart requires in health, under which it gains the steady control and the muscular power that the body requires for perfect development.

Breathlessness, that disagreeable foe to exertion, is always lessened by exercise, for two or three reasons. In all unusual exertion the heart pumps blood so quickly to the lungs as oftentimes to embarrass them; being unaccustomed to the sudden demand for more air, they are confused, as we may say, and hardly know how to adjust their machinery to

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the demand. And besides that fact, they have been unaccustomed to make use of their whole territory, many of their air-cells being under ordinary circumstances quite unexpanded and idle. It is this confusion that we call breathlessness; and like similar unexpected incidents elsewhere in life, if we can only know of it beforehand we can be prepared for the emergency, and avert the confusion incident to the surprise. Now, exercise acts upon the lungs as moral training does upon the character,—gradually accustoming them to prepare for and meet the emergencies of sudden exertion with calmness; so that they really learn to breathe more deeply and more evenly under this efficient teacher, and to make less ado about it at the same time. The ascent of two stairs at once, to one accustomed to mount only one at a time will at first make a girl “out of breath;” but constant repetition of the exercise will make it as easy to ascend two as one, while breathing with ease and comfort. So will a run down a gymnasium hall or swinging of Indian clubs, mean breathlessness to one who tries it for the first time; but the ease with which one in training can perform these trifling exercises, and many more considerable, shows how the lungs are trained by exercise to adjust themselves to work, so that they take in more breath and take it in more easily than before. The experience of mountain climbers corroborates this; and that is the secret of “training” in running, or other rapid exercises.

The joints are immensely improved by exercise; and this is a direction that needs cultivation and repays the training.

It is really upon the ease with which we move our joints that most of our grace and skill in movements depends. And perhaps some of the most noticeable regions of improvement through exercise are the joints. By movements they rapidly become more limber, more supple and easy in their movements. Piano-practice is a proof of the influence of constant exercise upon the joints in the hands and wrists, as well as an excellent one of what training will do to strengthen and educate muscles. The acrobat, too, and the contortionist show the result of constantly exercising the joints of the body, while ordinary gymnasium practice soon shows its results in the increased pliability of the shoulder and arm joints. The fluid that lubricates these regions is probably increased in quantity by exercise, so increasing the smoothness of their action; and we know, too, that constant exercise tends to delay the changes in the joints that come with old age, when concretions form, and the fluid is apparently less in quantity, with the result that the joints become stiff, and are moved even with pain.

It is not a gracious thing to refer to the age of ladies, but it is well known that the most famous and charming women actors are no longer in their girlhood; yet who would fancy from the grace of motion and the supple attitudes, and the succession of rapid changes in position, involving sometimes the larger proportion of the important muscles and joints of the body, that these women were beyond their earliest youth. In fact these queens of the stage put to shame, in their physical accomplishments, the average girl of sixteen or twenty, and this by no means because they were born graceful and supple; on the contrary most of them have attained this

skill through persistent exercise, carried on systematically for many years. In the sense of the bodily changes that mean old age, such people will remain young long beyond the natural period, and are generally physically fresh to the end.

The effects demonstrated by exercise upon the digestive canal, composed, as that is, so largely of muscular fibre, are very evident. Anything that develops the natural powers of organs improves their structure. Since digestion depends partly upon the movements of food all about the stomach, which are effected by its muscular coats, and intestinal digestion also partly upon the vigor of the muscular coats of that canal, we can readily believe that a better digestion and more regularity of the intestinal functions, and consequently better health and vigor will follow strengthening of this muscular structure. Practically we find this true, dyspepsia and constipation being often relieved by the prescription of muscular exertion when medicine has failed.

Exercise will also undoubtedly reduce fat in the body. While a certain amount of this tissue is indispensable, and many girls need more instead of less, many individuals suffer from an excess, which is really undesirable for various reasons. Such excess is a dead weight upon the body. Now, it appears to be so partly from its actual mechanical weight, and partly because it absorbs a large quantity of oxygen which would otherwise go to support more useful parts of the body, so that very stout persons easily become breathless because the supply of oxygen which should belong to the body in general is largely appropriated for the benefit of adipose tissue alone. Exercise reduces fat evidently by increasing perspiration, which subtracts water from the fatty tissue, and also by increasing the combustion and destruction of its constituents.

So through all the different machinery of the body we can trace the benefits of regular exercise in invigorating and developing organs and making their working power greater and easier; and we can see how we have by exercise really improved upon ourselves as we came from nature (not as we were intended to come, however), and have, seeing the changes that we can effect at will in this way, demonstrated to ourselves once more that heredity, powerful as it is, is by no means all powerful and conclusive.

Suppose we look for a moment at the record of "gains" that can be shown in a girl's gymnasium. It is not a small thing that a young woman should have all of her body machinery so improved and stimulated to growth by twelve months' practice in a gymnasium that she should add two inches to her narrow chest, the same to her stature, and increase her lung capacity by thirty per cent. It is not unimportant, when we remember the small strength of her arms when she entered, and how tired her back that she should find many of her strength tests doubled in actual figures, and that she can look with a pardonable pride upon the erect spine and the vigorous arm that she has gained herself in these few months, while the consciousness of controlling her body instead of having it control her, the knowledge that skill and agility and courage and a dozen other longed-for qualities have come to her through these few months of systematic but pleasurable practice, make the benefits of exercise seem very

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real to her, and to many others such as she. For this is not a fancy sketch, but has been repeated once and once again within the writer's knowledge, and I doubt not is being happily repeated in every well-organized gymnasium in the land, where the city girl is having an opportunity to recover her birthright.

Figures have been printed in every recent book that has been written upon any one's experience in the direction of physical training, to prove what wonderful gains can be made in a few weeks or months of systematic exercise. It is nothing unusual to find much more startling records than the simple case that has just been quoted. Every one of experience knows that a chest can be developed, and arms can be increased in size, and backs can be strengthened and straightened, and muscular strength even trebled. But once more, desirable as these things are, it must be remembered that they are only the external signs and tokens of the many complex changes for good that have been simultaneously going on within the body, by which the whole economy has been stimulated to better growth, quicker life, and higher activity, improving its chances for life and doubling its capacity for enjoyment.

These results of exercise prove its importance for the adult and the mature as well as for the child and the young girl who has yet to perfect her physical powers; they help to persuade us that even after physical training has helped to develop us in youth there is still a large sphere for it in maintaining the good work it has begun, so that exercise is part of the privilege of the mature young woman as well as of the undeveloped girl.

From "PHYSICAL DEVELOPMENT AND EXERCISE FOR WOMEN."
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HOME AMUSEMENTS FOR YOUNG AND OLD

Sweet recreation barred, what doth ensue
But moping, moody, and dull melancholy,
Kinsman to grim and comfortless despair;
And, at her heels, a huge infectious troop
Of pale distemperatures, and foes to life?
Shakespeare, Com. of Errors, Act V, Sc. 1.

GAMES FOR EVENING PARTIES, ETC.

Hunt the Slipper.

The boys seat themselves in a circle on the ground, and another, taking his place inside the ring, gives a slipper to one of them, by whom it is immediately and secretly handed to one of his neighbors; it is now passed round from one sitter to another with as much dexterity as possible, so as to completely perplex the "hunter" (or player standing in the middle), who must search until successful; the player in whose possession it is found must in his turn "hunt the slipper," whilst the former hunter joins the sitters.

Puss in the Corner.

Four players take their stations in the four corners of a room, and a fifth called "Puss" places himself in the middle of it; the players in the corners then change places by running to the opposite ends, and Puss must endeavor to get into one of the vacant places before the opposite player is able to reach it; if he can do so, the player left out becomes Puss.

Hot-Cockles.

One player with his eyes bandaged lays his head on a chair, or in another player's lap, while the others strike him on his back with their open hands. In this unenviable position he remains until he can guess who strikes him, when the striker takes his place.

Blindman's Buff

Consists in one person having a handkerchief bound over his eyes so as to completely blind him, and thus blindfolded trying to chase the other players either by the sound of their footsteps, or their subdued merriment, as they scramble away in all directions, endeavoring to avoid being caught by him; when he can manage to catch one, the player caught must in turn be blinded, and the game be begun again. In some places it is customary for one of the players to inquire of Buff (before the game begins) "How many horses has your father got?" to which inquiry he responds "Three." "What colors are they?" "Black, white, and gray." The questioner then desires Buff to "turn round three times, and catch whom you may," which request he complies with, and then tries to capture one of the players. It is often played by merely turning the blindfold hero round and round without questioning him, and then beginning. The handkerchief must be tied on fairly.

Oranges and Lemons.

Two of the players take each other's hands and hold them up in the form of an arch and the others, taking hold of each other's coats and dresses, pass under the arch one after the other, while the archway players chant the following ditty:

NOTE—In arranging this section the games for the younger members of the family come earliest and continue to follow the ages of the young folks until the "grown-ups" are reached.

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"Oranges and Lemons, say the bells of St. Clements.
You owe me five farthings, say the bells of St. Martin's.
When will you pay me? say the bells at Old Bailey.
When I grow rich, say the bells at Shoreditch.
When will that be? say the bells at Stepney.
I do not know, says the great bell at Bow.
Here comes a candle to light you to bed,
And here comes a chopper to chop off the last, last, last man's head."

And as the last man comes to the arch, it descends and cuts him off from his companions. His captors then ask him if he prefers oranges or lemons, and according to his reply he is sent to stand behind one or the other of the two making the arch. This continues till all the last men's heads have been cut off, and the players are divided into two parties on opposite sides. They then take hold of each other round the waist, and the foremost players grasp each other by the hands. The party that can drag the other across the room wins.

Shadow Buff.

Shadow Buff differs very materially from blindman's buff, but it is equally amusing. A large piece of white linen should be fastened neatly up at one end of a room, so that it hangs quite smooth; Buff (not blinded) seats himself on a low stool with his face to the linen, and a table, on which is a light, should be placed about four or five feet behind him, and the rest of the lights in the room extinguished. Buffy's playfellows next pass in succession, between the light and him, distorting their features in as grotesque a manner as possible—hopping, limping, and performing various odd antics, so as to make their shadows very unlike their usual looks. Buffy must then try to guess to whom the shadows belong, and if he guesses correctly, the player whose shadow he recognized takes his place. Buff is allowed only one guess for each person, and must not turn his head either to the right or left, to see who passes.

Magic Music.

One player having been sent out of the room, the others arrange some simple task for him to perform on his return. When this has been done, he is summoned by the magic music which is played by one of his comrades, either by tapping a tea-tray with a key, or by rattling the poker and tongs together. The boy who has been sent out of the room must perform his appointed task under the guidance of the musician, who so regulates his performance on the rude instruments that the music gets loud and noisy when the puzzled player does what he ought not to do, and grows soft and quiet when he does anything towards the performance of his task. Suppose the task to be the removal of a certain chair from one room to another. The player having entered the room is saluted by the magic music, the unmeaning clatter of which only confuses him at first. He walks towards the side of the room where the chair is stationed, and as he approaches it the clatter grows fainter; this informs him that he is in the right path. He touches the table but removes his hand at the sound of the music which suddenly grows louder. He touches the chair; the music ceases. He now knows that he is expected to do something with this particular chair, so he naturally sits down upon it, but he jumps up directly he hears the "clatter, clatter, clatter," of the music. He lifts the chair, and as he does so the music grows soft again. He now turns the chair upside-down; carries it into the middle of the room; places it on the sofa; but he cannot stop the magic music. At last he carries the chair into the adjoining room; the music ceases, and his task is done. The other players then go out of the room and have tasks set them in turns. The musician generally retains his office throughout the game.

Hunt the Whistle.

A boy who has never seen the game played is elected *hunter*; the others seat themselves on the ground as in Hunt the Slipper. The hunter having been shown the whistle, kneels in the centre of the circle, and lays his head in the lap of one of the players until the whistle is concealed. While he is in this posture the whistle is to be secretly attached to the back part of his jacket or coat by means of a piece of string and a bent pin. One of the players now blows the whistle and drops it, and the hunter, being released, is told to find it, but this is no easy task as he carries the object of his search about his own person. As the hunter kneels in the centre of the group, the different players blow through the whistle and drop it, as the opportunities occur. The puzzled hunter is sometimes fairly tired out before he discovers the trick that is played upon him.

Dumb Motions.

The players form sides, and decide who shall be *masters* and who *men*. The principal aim of the *men* is to keep working as long as possible, and to prevent the *masters* taking their places. The men consult secretly among themselves and decide upon some trade or profession, the practice of which may be shown by certain movements of the arms, hands, and legs. They now range themselves opposite the masters, and the foreman tells them the first and last letters of the trade they are about to exercise; as for example, C—r for carpenter, D—t for

druggist, B—h for blacksmith, and so on. The men now set to work and express in dumb motions the various labors belonging to the craft they have chosen. Let us suppose that they have selected the trade of blacksmith, one of the players will appear to be blowing the forge bellows, another will seem to be bling something in a vise, while others will be exerting themselves by wielding imaginary sledge-hammers round an unseen anvil. If any of the men speak at their work, or make use of inappropriate guesures, the whole side is out. The masters are allowed one guess each, and if none of them can hit upon the right trade, the men tell them their occupation, and then fix upon another. If the masters can guess the name of the trade, the men are out and become masters. The men need not continue their labors until all the masters have guessed, but may stop working, and demand their wages after having plied their craft for a reasonable time. When the name of a trade consists of two words, the men must tell the first and last letter of each word, as C—h B—r, for coach builder.

The Lame Lamplighters.

Two boys kneel down opposite one another, each resting on one knee, and holding the other leg off the ground; a lighted candle is placed in the hand of one of them, and a candle not lighted is given to the other; the latter then tries to light his candle from that of the former.

Trussed Fowls.

Two boys having seated themselves on the floor, are *trussed* by their playmates; that is to say, each boy has his wrists tied together with a handkerchief, and his legs secured just above the ankles with another; his arms are then passed over his knees, and a broomstick is pushed over one arm, under both knees, and out again over the other arm. The "trussed fowls" are now carried into the centre of the room and placed opposite each other with their toes just touching. The fun now begins; as each fowl endeavors, with the aid of his toes, to turn his antagonist over on his back or side, and the one who can succeed in doing this wins the game. It frequently happens that both players turn over together to the great amusement of the spectators.

The Stopping Stretch.

Chalk a line on the floor, and place the outer edge of the right foot on it, and at a little distance behind the right foot, put the left heel on the line. Then take a piece of chalk in your right hand, bend down and pass the right hand between your legs and under the right knee, and chalk a line on the floor, as far from the former line as you possibly can, yet not so far but that you can easily recover yourself without touching the ground with your hands, or removing your feet from the line. Your knee and body may project beyond the chalked line, provided you keep your feet properly placed.

The Palm Spring.

Stand at a little distance from a wall, with your face towards it, and lean forward until you are able to place the palm of your hand quite flat on the wall; you must then take a spring from the hand, and recover your upright position, without moving either of your feet. It is better to practise it first with the feet at a little distance only from the wall, increasing the space gradually.

Trials of the Thumb.

Place the inside of the thumb on the edge of a table, taking care that neither of the fingers nor the palm of the hand touch it; next move your feet as far back as you possibly can, and then taking a spring from the thumb, recover your standing position, without shifting your feet forwards. The table should be a heavy one, and not upon castors, or the other end should be placed against a wall, else in springing back you would in all probability push it away and fall upon your hands and knees. It greatly facilitates the spring if you rock yourself to and fro three or four times before you take it; and it is best to begin as in the "palm spring," with the feet at a little distance from the table, increasing the "trial of the thumb" by degrees.

Tumble-Down Dick.

A strong, long-backed old-fashioned chair is the best adapted for this feat. Place the chair down on the floor, front legs down, and put a small piece of money at the end or else about the middle of the back. Next kneel on the back legs of the chair, and take hold with both hands of the sides of the legs near the seat rail; then bend down and endeavor to touch the back of the chair with your face, and take up the piece of money; you must be careful that you do not fall forwards, or allow the top of the chair to touch the ground. The position of the hands may be altered, either higher up or lower down the back of the chair, as may be necessary.

To Take a Chair from Under You without Falling.

In order to perform this feat, you must lie along on three chairs. Throw up your chest, keep your shoulders down, and your limbs as stiff as you possibly can; then take the centre chair from under your body, carry it over and place

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it again under your body on the opposite side. Although this at first sight appears difficult, yet in reality it is very easy; it is as well, however, to have a chair of a rather lighter construction for the middle one, as you are thereby enabled to do it with less strain upon the muscles of the body and arm.

Prostrate and Perpendicular.

Cross your arms on your body, lay down on your back, and then get up again, without using either your elbows or hands in doing so.

Knuckle Down.

This is a very good feat. Place the toes against a line chalked on the floor, kneel down and get up again without using the hands, or moving the feet from the line.

The Tantalus Trick.

Desire a player to stand with his back close to the wall, then place a piece of money on the floor, at a little distance in front of him, and tell him he shall have it if he can pick it up without moving his heels from the wall. Although at first sight it appears very easy to do this, it will be found impossible, as in bending, a part of the body must necessarily go back beyond the heels, which is of course prevented by the wall.

The Triumph.

This requires great practice to perform. Put your arms behind you and place the palms of your hands together, the fingers downwards, and the thumbs next your back; then turn your hands, keeping the tops of the fingers close to your back, and the palms still together, until the ends of the fingers are between your shoulders, pointing upwards towards your head, and the thumbs outside.

Dot and Carry Two.

This is to be performed by three players, whom we will style A, B, C, in the following manner: A, standing between B and C, must stoop down, and pass his right hand behind the left thigh of B, and grasp B's right hand; he should next pass his left hand behind the right thigh of C and take hold of C's left hand; B and C should each pass one arm round the neck of A, and the latter, by raising himself gradually, will be able to lift the others from the ground.

Jumping Through Your Fingers.

Hold a piece of wood between the forefingers of both hands, stoop down, and without letting go, try to jump over it both forwards and backwards; with a little practice it can be done easily, the hardest part of the feat consisting in the difficulty of clearing the heels; indeed with high-heeled boots or shoes it is next to impossible to achieve it. It is possible to jump over your middle fingers placed together, without touching or separating them with your feet.

The Finger Feat.

Place your hands horizontally across and close to your breast, and put the tips of your forefingers together; another player should then endeavor to separate them, by pulling at each wrist and standing directly in front of you, but if you hold them firmly in the manner described, he will be unable to achieve it, although he may be much bigger and stronger than you are. No sudden or violent jerks should be used, only a steady regular pull.

TABLE AND PARLOR GAMES.

Head, Body, and Legs.

One player takes an oblong piece of paper, and having divided it into three equal parts by folding, he sketches a comic *head*, either with pen or pencil, in the upper space; he then doubles the paper over, and hands it to another, who draws a *body* in the middle compartment, folds the paper over once more, and passes it to a third, who completes the figure by drawing a pair of *legs* in the lower space. The player who draws the head must continue the neck a little way into the middle space, and he who sketches the body must just commence the legs in the lower compartment; this arrangement insures the connection of head, body, and legs. Each player should be provided with a pen or pencil, and a few pieces of paper; having drawn a head, he should fold his sketch in the proper manner and pass it to his right-hand neighbor; in this way a number of figures may be finished simultaneously. A knowledge of drawing is not expected of any player, as the crudest notion of a head, a body, or a pair of legs, will do. Those who have never played at Head, Body, and Legs, can have no idea of the absurd combinations that spring from the independent labors of the different players; thus, a man's body will sometimes get joined to a donkey's head, and be supported by the legs of an ostrich.

Consequences.

The first player writes an *adjective* on the upper part of a slip of paper, and then folds the slip so that the written word cannot be seen by the next player, who writes the *name of a gentleman*, real or imaginary, on the paper, which he

passes to another after having folded it over again. The third player writes an adjective; the fourth, a lady's name; the fifth, the name of a place; the sixth, what the gentleman said to the lady; the seventh, the lady's reply; the eighth, the consequences; and the ninth, what the world said about the whole affair. One of the players now unfolds the slip and reads what has been written by the different players, adding a few words to unite the disjointed members of the little narrative. Some such results as the following may happen: "*The ill-favored Peter Wilkins met the adorable Jenny Jones in the silver mine of Potosi. He said to her, 'Will you love me then as now?' and she replied, 'When did I refuse you anything?' The consequences were, he drowned himself in the water-butt and she married the baker, and the world said, 'Served them right!'*" When there are only three or four players the slip of paper is to be passed round from one to another until it is filled up. When the players are numerous, three or four slips may be commenced simultaneously by different persons.

Trades.

Every player, except one who holds the office of reader, selects a trade or profession which he must retain throughout the game. When all have chosen their trades, the reader opens a book at random and reads a passage from it aloud, but when he comes to any common noun he looks at one of the tradesmen, who must instantly name some article that he is supposed to have for sale, or some implement connected with the exercise of his craft. By this substitution of one noun for another the most pathetic passage is converted into an indescribable jumble of absurdities.

Adjectives.

This is a similar game to Trades. One of the players writes a letter, in which he leaves a blank space wherever an adjective ought to be; he then asks the other players in rotation to supply him with adjectives, and with these he fills up the blanks left in his epistle.

Crambo.

Each player writes a question and a noun on separate pieces of paper. All the questions are to be placed together in a hat or vase, and all the nouns in another; this having been done, each player has to draw a question and a noun, and then write a verse in answer to the question in which the noun is introduced. When every one has finished his task, the verses are to be collected and read aloud by the player who holds the office of reader.

An example of these Crambo verses will enable the reader to form a clear idea of this amusing game. Let us suppose that one player draws the absurd question: *What becomes of all the orange-peel?* and the noun, *Wig*; his verse might be as follows:

This question to a counsellor I put,
He scratched his horsehair *wig*,
And said he thought 'twas trodden under foot
Or eaten by the pig.

Acting Crambo.

This is a variation of Crambo, sometimes called Dumb Crambo, in which, instead of telling the meaning of the word, it is acted in dumb show, the others guessing at the same.

Two of the players usually choose sides, one leaving the room and returning to act its guesses after being informed what the chosen word rhymes with.

The acting may be done by one person, and be simply a movement of the hand or body, as, for instance, in guessing the word *shake* or *bend*. Again the whole side may act a *charade*. This latter is a matter of choice, and depends upon how much time the company wishes to give to the game.

Hand.

Sides must be formed, and the players of each side must seat themselves at a table opposite their antagonists. Chance decides which of the sides shall first hide the *piece*, which may be anything that can be easily held in the closed hand of one of the players. One of the players now exhibits the piece to his opponents, this done, he cries out "Hands down!" at which signal he and his comrades put their hands out of sight, and in the language of the game commence "working the piece," by shifting it from hand to hand, so as to deceive the opposite players as to its whereabouts. This done, the chief player calls out, "Hands up," and he and all his comrades simultaneously place their closed fists on the table. The top player on the opposite side has now to fix upon the hand in which the piece is concealed. There are two ways of guessing: one is to point at once to the hand supposed to contain the piece and cry out, "Hand!" the second is to point to those hands which appear to be empty, saying with each guess, "Take that hand away!" and when most of the hands have been removed from the table, to fix upon the most likely-looking one among those that remain. If the guesser can find the piece without making a mistake, he claims it for his party, and is entitled to guess again when the opposite side regains it; but if he makes a mistake, either by ordering the hand that holds the piece to be removed, or by "handing" an empty fist, his antagonists retain the piece, and

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having concealed it, the second player attempts to discover its whereabouts. This is no mere game of chance. A good player watches the faces of his opponents while their hands are engaged in working the piece under the table; he does not allow himself to be misled by any of the tricks which the hiders employ to throw him off the scent; on the other hand, when he has the piece he takes care not to let a tightly-clenched fist, a smile, or an anxious expression, betray the fact to the other side.

Jackstraws, or Jerk-Straws, and Spillikins.

This game may be played with straws about three inches long, but thin slips of deal of the same length are far superior, not being so liable to break. Forty or fifty of these slips are required of three inches, and three or four of six inches in length; they should all be rounded at one end, and pointed at the other. Some of these jackstraws are styled King, Queen, Bishop, etc., and should be distinguished from the others by dipping both ends of the straw in red paint for the King, and one end for the Queen; the Bishop should differ in color, and he may be painted black; the variations may also be made by putting little touches of wax on them instead of colors; these distinguished straws have different values assigned to them—as, for instance, four for the King, three for the Queen, and two for the Bishop. One player should take up all the jackstraws in a bundle, and holding them at a little height from the table, let them fall down in a confused heap on it; each player must then try alternately to take away a jackstraw from the heap without moving any of the others, and this is generally very easy to accomplish at the first, for the top straws are mostly unconnected with the rest, but as the players proceed it requires some tact to jerk them out, with the help of a "pointer," or piece of wood made pointed for the purpose. The player who, at the entire removal of the heap, has the greatest number of straws, wins the game. Should any of the straws while being removed shake the others, they must be put back into the heap again. It is usual in some places, instead of each player removing a straw alternately, for one to continue lifting up the straws until he happens to shake one, when another player takes his turn until he in like manner fails, when another tries his fortune; and so the game continues, until all the straws are withdrawn.

Spillikins is a game founded on that of the jerk-straws, the rules for playing it being precisely the same. The spillikins are made of thin pieces of ivory cut into different forms, some being like spears, others saws, bearded hooks, etc.; of some of the patterns there are duplicates, whilst of others only one. Each pattern has a value assigned to it, the lowest being five, and the highest forty; the numbers do not run in regular succession—as five, six, seven, eight—but irregularly, as five, sixteen, twenty-five. Hooks, made of bone, are employed instead of pointers.

The Cutwater.

The Cutwater is a circular piece of sheet lead, notched like a saw round the edge, and having two holes pierced in it at some distance from the other, through which is passed a piece of string, the two ends being afterwards tied together. To set the cutwater in action the doubled string must be alternately pulled and slackened. Every time the string is relaxed the disc revolves in consequence of the impetus it has acquired from the previous pull, and every time the string is tightened it whirls round in an opposite direction, as the doubled string is then untwisted. If the edge of this toy be dipped in water it may be made to sprinkle the bystanders and the player, hence its name of "Cutwater."

Knuckle-Bones

Is played with five little bones from a sheep's foot. One player tosses up the knuckle-bones, sometimes one at a time and sometimes all together, and catches them in the palm or on the back of his hand according to certain rules. Should he fail to perform one of the tricks properly he must hand the bones to his opponent, who attempts to go through the same series of manoeuvres with them. When the first player regains the bones through the unskilful play of his adversary, he once more attempts the feat which he failed to accomplish before, and if he succeeds he tries to pass through the subsequent stages of the game. The player who first arrives at the end of the regulated series of tricks wins the game. In almost every school may be found an experienced player at knuckle-bones, whose directions will be of more value than any written description.

The Te-Totum.

The te-totum is a kind of top or whirlingig which can be spun with the finger and thumb; it is marked with certain letters or figures, and the player wins or loses according to what comes uppermost when the top ceases to spin. The old-fashioned te-totum had only four sides, each of them marked with a letter: a T for *take all*; an H for *half*—that is, of the stake; an N for *nothing*; and a P for *put down*—that is, a stake equal to that put down at first. Te-totums are now made with many sides and figures, but the games played with them do not differ materially from the old Take-all game. The players generally stake nuts or candles.

GAMES AT FORFEITS.

When a player in any of the following games fails to accomplish certain tasks, he has to pay a forfeit, which may be a glove, a trinket, or any other small object belonging to him, to the person who volunteers to hold the office of forfeit-keeper. In redeeming their forfeits, the players incur certain penances which cannot be performed with spirit without the assistance of young ladies. As a general rule a game of forfeits is continued until each player has pledged three articles, but this arrangement may be modified according to circumstances.

The Four Elements.

The party being seated in a circle, the player who has been chosen to begin the game takes a knotted handkerchief, and throws it suddenly into another's lap, calling out at the same time either "Earth!" "Water!" "Air!" or "Fire!" If "Earth" be called the player into whose lap the handkerchief has fallen must name some *quadruped* before the other can count ten; if "Water!" he must name a *fish*; if "Air!" a *bird*; and if "Fire!" he must remain silent. Should the player name a wrong animal, or speak when he ought to be silent, he must pay a forfeit and take a turn at throwing the handkerchief; but should he perform his task properly he must throw the handkerchief back to the first player.

The Family Coach.

The chief player in this amusing game must possess the faculty of inventing a long story, as well as a tolerably good memory. This player gives to each of the others the name of some person or thing to be mentioned in the story he is about to relate. For example, he may call one "the coachman," another "the whip," another "the inn," another the "old gentleman," another the "footman," another "the baggage," and so on until he has named all the persons engaged in the game. The story-teller now takes his stand in the centre of the room, and begins his story; in the course of which he takes care to mention all the names given to the players. When the name of a player is mentioned he must immediately rise from his seat, turn round, and sit down again, or else pay a forfeit for his inattention, and whenever "the family coach" is named all the players must rise simultaneously. In the following example of a story the names given to the different players are printed in italics: "An *old gentleman* dreading an attack of the gout resolved to pay a visit to the hot wells of Bath; he therefore summoned his *coachman* and ordered him to prepare THE FAMILY COACH (all the players rise, turn round, and sit down again). The *coachman*, not liking the prospect of so long a journey, tried to persuade the *old gentleman* that THE FAMILY COACH was out of repair, that the *leader* was almost blind, and that he (the *coachman*) could not drive without a new *whip*. The *old gentleman* stormed and swore upon hearing these paltry excuses, and ordered the *coachman* out of the room, while the *little dog* sprang from under his master's chair and flew at the calves of the offender, who was forced to make a precipitate exit. Early the next morning THE FAMILY COACH belonging to the *old gentleman* stopped at an *inn* on the Bath road, much to the surprise of the *landlord*, who had never seen such a lumbering conveyance before. THE FAMILY COACH contained the *old gentleman*, the *old lady* (his wife), and the *little dog* that had made such a furious attack on the poor *coachman's* legs. The *landlord* called the *landlady*, who came bustling out of the *inn* to welcome the *old gentleman* and *old lady*. The *footman* jumped down from behind THE FAMILY COACH and helped the *old gentleman* and the *old lady* to alight, while the *boots* and *chambermaid* belonging to the *inn* busied themselves with the *luggage*. The *little dog* trotted after the *old lady*, but just as it was going into the *inn* the *coachman* gave it a cut with his *whip*. The *little dog* howled, upon which the *old gentleman* turned round, and, seeing the *coachman* with his *whip* raised, he seized him by the throat. The *footman* came to the assistance of his friend the *coachman*, and the *ostler* belonging to the *inn* took the side of the *old gentleman*. The *landlord*, *landlady*, *chambermaid*, *boots*, *cook*, *stable-boy*, *barmaid*, and all the other inmates of the *inn*, rushed into the road to see what was the matter, and their cries, joined to the yells of the *little dog* and the screams of the *old lady*, so frightened the *leader*, the *white horse*, and the *brown mare*, that they ran away with THE FAMILY COACH." The tale might be shortened or continued.

The Huntsman.

This lively game may be played by six, eight, or more persons, and in fact, by any number above four. One of the players is styled the "huntsman," and the others must be called after the different parts of the dress or accoutrements of a sportsman; thus, one is the coat, another the hat, whilst the shot, shot-belt, powder, powder-flask, dog, and gun and every other appurtenance belonging to a huntsman, has its representative. As many chairs as there are players, excluding the "huntsman," should next be ranged in two rows, back to back, and all the players must then seat themselves; all being thus prepared, the "huntsman" walks round the sitters and calls out the assumed name of one of them, as for instance, "Gun!" That player immediately gets up and takes hold of the coat-skirts of the "huntsman," who continues his walk, and calls out all the others, one by one; each must take hold of the skirts of the player before

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him, and when they are all summoned, the huntaman sets off running round the chairs as fast as he can, the other players holding on and running after him. When he has been round two or three times, he calls, or rather shouts out "Bang!" and immediately sits down on one of the chairs, leaving his followers to scramble to the other seats as they best can. Of course, one must be excluded, there being one chair less than the number when the huntaman sits down, and the player so left out must pay a forfeit. The game is continued until all have paid three forfeits, when they are cried, and the punishments or penances declared. The huntsman is not changed throughout the game, unless he gets tired of his job.

The Game of the Key

May be played by any number of persons, who should all, except one, seat themselves on chairs placed in a circle, and he should take his station in the centre of the ring. All the sitters must next take hold, with their left hands, of the right wrists of the persons sitting on their left, being careful not to obstruct the grasp by holding the hands. When all have in this manner joined hands, they should begin moving them from left to right, making a circular motion, and touching each other's hands, as if for the purpose of taking something from them. The player in the centre then presents a key to one of the sitters, and turns his back, so as to allow it to be privately passed to another, who hands it to a third, and so it is handed round the ring from one player to the other, with all imaginable celerity, which task is exceedingly easy to accomplish, on account of the continued motion of the hands of all the players. It is the office of the player in the centre, after allowing time for the key to be passed on to the third or fourth player, to watch its progress narrowly, and to endeavor to seize it in its passage. If he succeeds in his attempt, the person in whose hand it is found, after paying a forfeit, must take his place in the centre, and give and hunt the key in his turn; should the seeker fail in discovering the key in his first attempt, he must continue his search until he succeeds. When a player has paid three forfeits he is out.

Acting Rhymes.

The players being seated in a circle, one of them gives a simple word, to which each has to find a rhyme that can be expressed by some movement, grimace, or inarticulate sound. Let us suppose that six persons are engaged in this pastime, and that the first player proposes the word *bat*; the second player stands up and rubs his shoes on the carpet to signify that he is using a *mat*; the third player now commences to purr or mew like a *cat*; the fourth makes a low bow and raises an imaginary *hat* from his head; the fifth, if sufficiently active, scampers about the room on all fours like a *rat*; the sixth goes through certain antics supposed to pertain to the Irish character, by which he tries to intimate that he is *Pat*; and the first player, who is bound to find a rhyme to his own word, lies on his back and stretches out his hands so as to be perfectly *flat*. If any player speaks while acting his rhyme, if he fails to make his actions intelligible, or if he cannot find a rhyme to the given word, he must pay a forfeit. The players take it by turns to propose a word, which should never consist of more than one syllable.

Post.

This exciting game may be played by an unlimited number, and is particularly adapted for a large party. One of the players, called "the postman," has his eyes bandaged as in Blindman's Buff, another volunteers to fill the office of "postmaster-general," and all the rest seat themselves round the room. At the beginning of the game the postmaster assigns to each player the name of a town, and if the players are numerous, he writes the names given to them on a slip of paper in case his memory should fail him. These preliminaries having been arranged, the blind postman is placed in the centre of the room, and the postmaster-general retires to some snug corner whence he can overlook the other players. When this important functionary calls out the names of two towns, thus "London to Halifax," the players who bear these names must immediately change seats, and as they run from one side of the room to another, the postman tries to capture them. If the postman can succeed in catching one of the players, or if he can manage to sit down on an empty chair, the player that is caught, or excluded from his place, becomes postman. The postmaster-general is not changed throughout the game unless he gets tired of his office. When a player remains seated after his name has been called he must pay a forfeit, or if the game is played without forfeits he must go to the bottom of the class, which is represented by a particular chair, and to make room for him all the players who were formerly below him shift their places.

How? Where? and When?

One of the players is sent out of the room, while the others fix upon a subject which may be anything to which the three questions, "How do you like it?" "Where do you like it?" and "When do you like it?" will apply. When the subject has been decided upon, the out-player is summoned. He now puts the first question to the nearest player, who returns him a puzzling answer; he then passes to the next, and repeats the same question; then to the next, and so on

until he has made the round of the room. If none of the answers enable him to guess the subject, he tries each player with the second question, and if the answers to this leave him still in the dark, he solicits a reply from each to the third and last question. Should the player fail to guess the subject after asking the three questions, he pays a forfeit and takes another turn outside, but should he succeed in guessing it during his rounds, the player last questioned must pay a forfeit and go out of the room in his place. The in-players should always endeavor to hit upon some word that has two or three meanings for a subject, as such a word renders the answers extremely confusing. For instance, if *Jack* be the subject decided on, one of the players may say in answer to the first query, that he likes it "fried," referring to the fish called the Jack; in answer to the second, that he likes it "before the kitchen fire," referring now to a roasting-jack; and in answer to the third, that he likes it when he is "dressing," now regarding the subject as a boot-jack.

One Old Os Opening Oysters.

This is a capital round game, and will tax the memory and the gravity of the youngsters. The company being seated, the fogleman says, "*One old os opening oysters,*" which each must repeat in turn with perfect gravity. Any one who indulges in the slightest giggle is mulcted of a forfeit forthwith. When the first round is finished, the fogleman begins again: "*Two toads, totally tired, trying to trot to Troy;*" and the others repeat in turn, each separately, "*One old os opening oysters; Two toads, totally tired,*" etc. The third round is, "*Three tawny tigers tickling trout,*" and the round recommences: "*One old os, etc.; Two toads, totally, etc.; Three tawny tigers, etc.*" The fourth round, and up to the twelfth and last, given out by the fogleman successively, and repeated by the other players are as follows: "*Four fat friars fanning a fainting fly; Five fair farts flying to France for fashions; Six Scotch salmon selling six sacks of sour-brout; Seven small soldiers successfully shooting snipes; Eight elegant elephants embarking for Europe; Nine nimble noblemen nibbling nonpareils; Ten tipsy tailors teasing a titmouse; Eleven early earwigs eagerly eating eggs; and Twelve twittering tom-tits on the top of a tall tottering tree.*" Any mistake in repeating this legend, or any departure from the gravity suitable to the occasion, is to be punished by the infliction of a forfeit; and the game has seldom been known to fall in producing a rich harvest of those little pledges. Of course, a good deal depends on the serio-comic gravity of the fogleman.

Twirling the Plate.

The players sit or stand around a table covered with cloth, and one of them takes up a wooden or metal plate, which he sets on its edge, and gives it a spin. As he does this he names some one of the players, who is obliged to catch it before it has done spinning, or pay a forfeit. The player so called on sets the plate spinning, in turn, calling upon some other player to stop it, and so on all round.

What is My Thought Like?

One of a party thinks of some person, place, or thing; the Emperor Napoleon, New York, a coal-scuttle—anything, in fact, that first occurs to him; and then he asks each in turn, "What is my thought like?" They, in complete ignorance as to the nature of the said thought, reply at random. One says, for instance, "like a steam-engine;" another, "like a cavern;" a third, "like a tea-kettle." When an opinion has thus been collected from each one, the questioner tells what his thought was, and each player under penalty of a forfeit, has to give a reason for the answer made to the first question. We will suppose, continuing the instance just begun, that the questioner says to the first in company, "My thought was Napoleon III. Now, why is Napoleon III. like a steam-engine?" The answer is ready enough: "Because he goes at an uncommonly fast pace." "Why is he like a cavern?" "Because his depth is one of his distinguishing qualities," replies the second. "Why is he like a tea-kettle?" "Of course, because he boils over occasionally," says the third player, triumphantly; and so the game goes merrily on through the circle.

Cupid's Coming.

A letter must be taken, and the termination "ing." Say, for instance, that P is chosen. The first player says to the second, "Cupid's coming." "How is he coming?" says the second. "Playing," rejoins the first. The second then says to the third, "Cupid's coming?" "How?" "Francing;" and so the question and reply go round, through all the words beginning with P and ending with ing. Those who cannot answer the question on the spur of the moment pay a forfeit.

Cross Questions and Crooked Answers.

The company sit round, and each one whispers a question to his neighbor on the right, and then each one whispers an answer; so that each answers the question propounded by some other player, and of the purport of which he is, of course, ignorant. Then every player has to recite the question he received from one player and the answer he got from the other, and the ridiculous incongruity of these random cross questions and crooked answers will frequently excite a good deal of sport. One, for instance, may say, "I was asked 'If I considered dancing

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agreeable' and the answer was, 'Yesterday fortnight.' Another may declare, "I was asked 'If I had seen the comet?' and the answer was, 'He was married last year!'" A third, "I was asked 'What I liked best for dinner?' and the answer was, 'The Emperor of China!'"

Proverbs.

One of the company who is to guess the proverb leaves the room; the remaining players agree on a proverb, such as "All is not gold that glitters"—"A bird in the hand is worth two in the bush"—"Birds of a feather flock together"—"Train up a child in the way he should go"—"A miss is as good as a mile." A proverb being chosen, the words are distributed in rotation through the company, each player receiving a word which he must bring in in the answer he gives to any question asked by the guesser. We will suppose the proverb, "Train up a child in the way he should go," to have been chosen. The first person will receive the word "train," the second "up," the third "a," the fourth "child," the fifth "in," the sixth "the," and the seventh "way," and so on. The person who has gone out is now called in, and begins his questions with the first player, something in the following manner: Q. "Have you been out to-day?" A. No, I must *train* myself to like walking better than I do." He turns to the second player. Q. "Are you a member of the National Guard?" A. "No, I gave it up some time ago." The third player has an easy task to bring in the word *a*, but the fourth, with the word *child*, finds his work more difficult. Q. "Are you fond of reading?" A. "Any *child* might answer that question." Now, the guesser, if he be a sharp reasoner, will see that this answer is evasive, and only given to bring in the word *child*; he will, perhaps, guess the proverb at once; but if he is a cautious personage he will go on, and finish the round of questions before committing himself by a guess, for he is only allowed three. If he succeeds in guessing the proverb, he has to point out the person whose answer first set him on the right track, who must then pay a forfeit, and go out in his turn to have his powers tested.

PENANCES FOR REDEEMING FORFEITS.

All the foregoing games end with crying the forfeits incurred. The person who volunteers to impose the penances on the different players lays his head in the forfeit-keeper's lap so that his eyes may be covered. The keeper holds up one article at a time, saying, "Here's a pretty thing, a very pretty thing! What is to be done to the owner of this very pretty thing?" The forfeit-crier asks whether the article belongs to a lady or a gentleman, and having been informed, he imposes a suitable penance on the unfortunate owner of "the very pretty thing" in question. Following are a few penances, to which a number of new ones may be added by any one possessing the faculty of invention.

The Knight of the Rueful Countenance.—The player whose forfeit is cried is called the "Knight of the rueful countenance." He must take a lighted candle in his hand, and select some other player to be his squire Sancho Panza, who takes hold of his arm, and they then both go round to all the ladies in the company. It is the squire's office to kiss the hand of each lady, and after each kiss to wipe the knight's mouth with a handkerchief which he holds in his hand for the purpose. The knight must carry the candle throughout the penance.

The Country Table.—In this penance the owner of the forfeit selects some one to be secretary, and then kneels down upon his hands and knees on the floor, to represent the table, and his secretary takes his stand beside him. One of the company next dictates to the secretary, who should move his hands on the back of the kneeling player, as if he were writing a letter; the dictator must call out "comma!" when he wishes that stop to be made, which the secretary responds to by making a motion with his finger on the "country table," resembling that stop; a "semicolon" by giving a knock with his fist on the table and making a comma; a "colon" by giving two knocks, and a "full stop" by one. For the sake of losing as little time as possible in one forfeit, it is not necessary to request more than the points or stops to be made on the "country table."

Journey to Rome.—In this, the person whose forfeit is called must go round to every individual in the company to tell them that he is going on a journey to Rome, and to assure them that if they have any message or article to send to his Holiness the Pope, he will feel great pleasure in taking it. Every one must give something to the traveller, no matter how cumbersome it may be, or awkward to carry (indeed, the more inconvenient the articles are, the more it increases the merriment), until he is literally overloaded with presents. When he has gathered from all, he walks to a corner of the room, puts them down, and so his penance ends.

The Statue of Love.—The player who owns the forfeit cried takes a candle in his hand, and is led by another to one end of the room, where he must stand and represent the statue of Love; one of the players now walks up, and requests him to fetch some lady, whose name he whispers in Love's ear; the statue, still holding the candle, proceeds to execute his commission and brings the lady with him; she in turn desires him to fetch some gentleman, and so it continues till all have been summoned. The players brought up by Love must not go back again to their seats, but stand up in a group round Love's standing-place, until he has brought the last person in the company, when they hiss him most vigorously, and the forfeit then terminates.

The Bouquet.—The owner of the forfeit must compare each lady to a flower, and explain the points of resemblance. Thus he may liken one lady to a rose, on account of her blushes; another to a snowdrop, because she hangs her head so modestly; and another to a lily, because she is tall and fair. The penance gives the person who incurs it a capital opportunity for passing some pretty compliments.

Wit, Beauty, and Love.—To redeem his forfeit, the player has to bow to the wittiest, kneel to the prettiest, and kiss the one he loves best. We need scarcely add that the player must pick out three of the opposite sex.

The Four Corners.—To laugh in one corner of the room, sing in another, cry in another, and dance in another, is a penance that may be imposed on a player of either sex.

The Poker Feat.—The owner of the forfeit is ordered to bite an inch off the poker. This seemingly impossible feat is performed by holding the poker about an inch off, or distant from, the mouth, and then biting the air.

The Disconsolate Lover.—The player, who may either be a lady or gentleman, goes out of the room, and after sighing deeply, says in a loud voice, "I sigh!" The other players call out, "Who for?" to which question the disconsolate lover replies by naming one of the opposite sex, who must also go outside. The second player now sighs for a third; the third for a fourth; and so on until the room is cleared. We need not inform our readers that the different players take care to salute each other after having sighed so deeply.

The Barefooted Friar.—The penitent is commanded to put two chairs together, take off his shoes, and jump over them. The reader will perhaps think this a very dangerous penance, but if he will reflect a moment he will understand that the shoes and not the chair are to be jumped over.

The Will.—The player who owns the forfeit cried, has to leave the room, while the others arrange how his property is to be divided. When he is out of hearing they fix different values to different portions of his body: thus they may call his head the chief legacy; the right arm, the second; the right leg, the third; the left leg, the fourth; and the left arm, the fifth. The penitent is now summoned into the presence of his lawyer, which part may be filled by any player. "As you are desirous of making your will," he says, "may I ask you which of these persons is to be your principal legatee?" The unhappy victim points to some gentleman or lady. "To whom do you leave the second part of your property?" The owner of the forfeit now points to another person, and so the sport continues until he has willed away his head and limbs. The lawyer now orders the different legatees to seize their property, which they do with great eagerness, one catching hold of the head, and the others grasping the arms and legs, to the intense astonishment of the owner of these members, and the great amusement of the rest of the company.

To Perform a Grecian Statue.—This is a boy's forfeit, and he achieves his task by mounting on a chair or table, when each one of the company advances, in turn, and puts him in a different attitude, in which he must remain until it is altered by the next person. The fun consists in the ridiculous postures the unfortunate victim is compelled to assume by his tormentors.

To Pay each Person in Company a Compliment, and then Spoil it.—This will exercise the quickness and wit of the performer, and enable him besides to take a little harmless revenge on those of his friends who have been harassing him during the evening. To one, for instance, he says, "You have a finer voice than any one in this present company; but," he adds, as the person addressed bows to the compliment, "it's a pity that you never give it any rest." To another, "You have certainly a great amount of wit, only you always exercise it at the expense of your friends;" and to a third, "Your eyes are certainly very bright, and is that the reason why they're always searching for their own reflection in the looking-glass?" and so on, until you have finished your round.

To Brush off the Dime.—This is a trick which may be played off on a novice, and will excite much merriment if well managed. The owner of the forfeit is told that he will have to shake off a dime from his forehead, and a coin is shown him. The dime is then enclosed in a damp handkerchief, and pressed hard against the forehead of the victim, who is not allowed to put his hands up to his head. Feeling the impression of the dime on his brow, he will have no doubt that it has been really fastened on, and not suspecting its removal in the handkerchief, he will begin shaking his head from side to side, and even rubbing it against projecting pieces of furniture, to the delight of the spectators, in persevering efforts to get rid of what is not there.

To Play the Judge.—This consists in sitting on a chair in a conspicuous part of the room, and listening with the most perfect gravity to the complaints brought by the rest of the company, who try, by all kinds of ridiculous reports and artifices, to upset the stolidity of the learned gentleman on the bench.

Compliments under Difficulties.—Pay six compliments to six different persons, avoiding the use of the letter *i* in every one.

Prison Diet.—A glass of water and a teaspoon are brought into the room, and the person who has to undergo "prison diet" is blindfolded, and a teaspoonful of cold water administered to him by any of the others, until he guesses who is feeding him, which seldom happens, unless he be born under a fortunate star, till the glass of water is half empty.

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Other penalties for forfeits there are in abundance, such as to laugh, cry, cough, and sneeze in the four different corners of the room; to count forty backwards; to kiss your own shadow, without laughing, four separate times; to compose a rhymed verse; to hop on one foot three times round the room; to ask a riddle of each person in company; to repeat, without hesitation or mistake, some such brain-puzzle as the following:

"Robert Rowley rolled a round roll round;
A round roll Robert Rowley rolled round;
Where rolled the round roll Robert Rowley rolled round?"

How D'Ye Like Your Neighbor?

The company must be seated in a circle round the room, with a clear space in the middle. The chairs are placed close together, and the number of chairs is one less than that of the players; for instance, if thirteen players, twelve chairs. The chairless person stands in the middle of the room, and addressing one of the company, says, "Master Jones, how do you like your neighbor?" Jones may either answer, "Very well indeed;" or, singling out two of the company, he may say, "I prefer Master A. to Miss B." or "Miss A. to Mr. B." If, being of a contented disposition, he likes both his neighbors "very much indeed," all the players must change places; if, on the contrary, he prefers Master A. to Miss B., the two whom he names must change, the others sitting still; in either case it is the object of the person in the middle to get into one of the vacant chairs while the changing is going on; and if he can succeed in doing this, the person thus left seatless must stand in the middle, and ask the players how they like their neighbors; if not, the first player has to take up his position in the centre again, and the game goes on.

Battledoor and Shuttlecock

Can be played by quite young children of both sexes, and is equally adapted to "children of a larger growth." By increasing the size and weight of the shuttlecock, and substituting heavy wooden battledoors for the light, leather-covered frames, the game of shuttlecock may be made to yield considerable exercise, as well as amusement. The simplest form is where there are two players, who strike the shuttlecock alternately, the one who first suffers it to fall to the ground being the loser. But the game may be made more interesting, and at the same time amuse a greater number, when there are five or six players, who divide into sides, each having his number—one side, 1, 3, 5; the other, 2, 4, 6. The shuttlecock, first struck by 1, must then be hit by 2, and then, in turn by 3, 4, 5, and 6. The player who lets it drop is out, and the side of which one or more men are still in, after all their opponents have lost their position, wins.

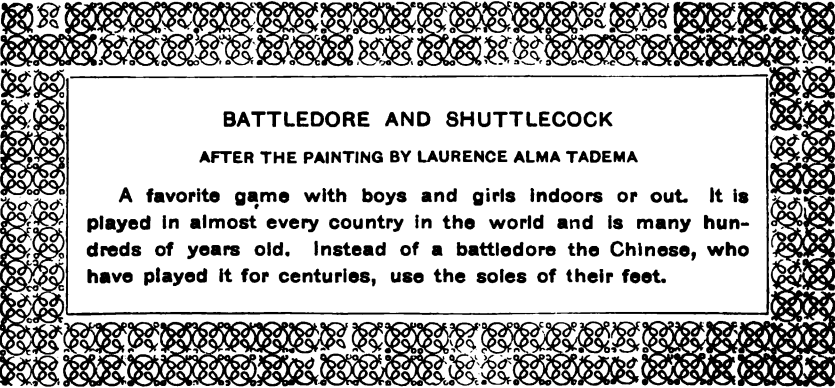
A good shuttlecock may be made, where there are no toy-shops to supply it, by cutting off the projecting ends of a common cotton-spool, trimming one end with a knife, and drilling holes in the flat surface left at the other, in which holes the feathers of quill pens are to be inserted. As for the battledoors, we should think very little of the boy who could not, on an emergency, cut out a set from a bit of thin board, or the flat lid of a box, with the help of the big blade of his pocket-knife.

The French are great adepts at this game, and light battledoors and shuttlecocks are wielded by them with great perseverance and considerable skill. There is one great advantage about this game, namely, that without requiring any great amount of strength, it thoroughly exercises every muscle of the player, and furnishes real exercise without producing exhaustion.

Conundrums.

1. Why is life the greatest of riddles?
Answer—Because we must all give it up.
2. What word becomes shorter by adding a syllable to it?
Answer—Short.
3. Why is a pig a paradox?
Answer—Because it is killed first and cured afterward.
4. Of what color is grass when covered with snow?
Answer—Invisible green.
5. What is even better than presence of mind in a railway accident?
Answer—Absence of body.
6. What is that which will give a cold, cure a cold, and pay the doctor's bill?
Answer—A draught (draft).
7. Why is the letter G like the sun?
Answer—Because it is the centre of light.
8. What is that from which the whole may be taken and yet some remain?
Answer—The word wholesome.
9. Why is blindman's buff like sympathy?
Answer—Because it is a fellow feeling for another.
10. Why need France never fear an inundation?
Answer—Because the water in France is *Peau*.





BATTLEDORE AND SHUTTLECOCK

AFTER THE PAINTING BY LAURENCE ALMA TADEMA

A favorite game with boys and girls indoors or out. It is played in almost every country in the world and is many hundreds of years old. Instead of a battledore the Chinese, who have played it for centuries, use the soles of their feet.

The Game of Twenty Questions.

One of the party leaves the room, and the others, in his absence, agree upon some subject which he is to guess, or rather, discover by successive questions.

He is allowed only *twenty questions*, which, with one exception, must be of such a character as to call for an answer in one word, affirmative or negative (Yes or No).

The exception is "Is it animal, vegetable, or mineral?"

This is generally asked as a first question.

It would seem, at first sight, that in view of the absolutely infinite range of subjects from which to choose, the position of questioner would be a difficult one to fill, but this is not altogether the case.

If the questioner is ordinarily acute in his perceptions and knows something of the art of putting questions, descending from the general to the particular, thus narrowing the field of conjecture at each stage, success is likely to result. A really skillful interrogator can often accomplish his task with several questions still remaining to his credit.

Take the familiar example, Oliver Cromwell.

The game begins and proceeds as follows:

Q.—"Is the subject you have thought of, animal, vegetable, or mineral?"
A.—"Animal." Q.—"Is it a human being?" A.—"Yes." Q.—"Is it male?" A.—"Yes." Q.—"Did he live in the Christian era?" A.—"Yes." Q.—"Prior to the reign of William the Conqueror?" A.—"No." Q.—"Before the reign of Elizabeth?" A.—"Yes." Q.—"In the reign of Charles the First?" A.—"Yes." Q.—"Was he a Puritan?" A.—"Yes." Q.—"Was he a man of action?" A.—"Yes." Q.—"Was he a member of Cromwell's Parliament?" A.—"Yes." Q.—"Was he a soldier?" A.—"Yes." Q.—"Was he above the rank of captain?" A.—"Yes." Q.—"Above the rank of Colonel?" A.—"Yes." Q.—"Above the rank of General?" A.—"Yes." Q.—"Is it Cromwell himself?" A.—"Yes."

Fifteen questions have sufficed to discover this subject, and even fewer would have done it.

Sometimes the game is varied, and incidentally made easier, by allowing two, three, or even four answers requiring more than one word, or if only one, a word more definite than yes or no.

This game naturally allows of great amplification, as it is not by any means confined to one particular form of subject; on the contrary, this may be made according to the fancy of the company, material, immaterial, real, or imaginary, under which headings will follow naturally, classifications, such as general, particular, complex, historical, fictitious, mythological, etc.

Divided Quotations.

This is entertaining if it is not made too intellectual. Of course, it is like all games of this character, a fairly good test of one's memory.

Each of the players is given a card bearing a number of familiar quotations, which, however, must be either unfinished at the end or not written out at the beginning.

For instance, "Vows are but breath" (and the rest, "*and breath a vapor is*"); or, "Welcome ever smiles" ("*and farewell goes out sighing*"); "A woman's nay doth stand for naught" (the beginning of which is: "*Have you not heard it said full oft?*"); "He may live without love, what is passion but pining" ("*But where is the man that can live without dining?*"); "A little more than kin" ("*and less than kind*"); "The adorning of the house" ("*is the friends who frequent it*"), etc. The end or beginning of the quotation given here in italics, or others chosen, must be supplied by the guessers, who will be surprised to find what a number of lines they can recall with a little practice.

For the benefit of those who are not well posted in quotations, as also to settle any dispute regarding the actual wording of the same, the hostess must have a book at hand to consult. The novices are not to consult the book during the progress of the game, but simply refer to it to verify the correctness of their guesses at the end.

The contestant who succeeds in beginning or finishing the greatest number of quotations correctly is declared winner, and to him or to her may be given a prize.

ARITHMETICAL AMUSEMENTS.

Aphorisms of Number.

1. If two even numbers be added together, or subtracted from each other, their sum or difference will be an even number.
2. If two uneven numbers be added or subtracted, their sum or difference will be an even number.
3. The sum or difference of an even and an uneven number, added or subtracted, will be an uneven number.
4. The product of two even numbers will be an even number, and the product of two uneven numbers will be an uneven number.
5. The product of an even and uneven number will be an even number.
6. If two different numbers be divisible by any one number, their sum and their difference will also be divisible by that number.

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7. If several different numbers, divisible by 3, be added or multiplied together, their sum and their product will also be divisible by 3.

8. If two numbers, divisible by 9, be added together, the sum of the figures in the amount will be either 9 or a number divisible by 9.

9. If any number be multiplied by 9, or by any other number divisible by 9, the amount of the product will be either 9 or a number divisible by 9.

10. In every arithmetical progression, if the first and last term be each multiplied by the number of terms, and the sum of the two products be divided by 2, the quotient will be the sum of the series.

11. In every geometric progression, if any two terms be multiplied together, their product will be equal to that term which answers to the sum of these two indices. Thus, in the series,—

$$\begin{array}{cccccc} 1 & 2 & 3 & 4 & 5 \\ 2 & 4 & 8 & 16 & 32 \end{array}$$

If the third and fourth terms, 8 and 16, be multiplied together, the product, 128, will be the seventh term of the series. In like manner, if the fifth term be multiplied into itself, the product will be the tenth term; and if that sum be multiplied into itself, the product will be the twentieth term. Therefore, to find the last, or any other term of a geometric series, it is not necessary to continue the series beyond a few of the first terms.

TO FIND A NUMBER THOUGHT OF.

First Method.

EXAMPLE.

Let a person think of a number, say..... 6
 1. Let him multiply by 3..... 18
 2. Add 1..... 19
 3. Multiply by 3..... 57
 4. Add to this the number thought of..... 63
 Let him inform you what is the number produced; it will always end with 3. Strike off the 3, and inform him that he thought of 6.

Second Method.

EXAMPLE.

Suppose the number thought of to be..... 6
 1. Let him double it..... 12
 2. Add 4..... 16
 3. Multiply by 5..... 80
 4. Add 12..... 92
 5. Multiply by 10..... 920
 Let him inform you what is the number produced. You must then, in every case, subtract 320; the remainder is, in this example, 600; strike off the 2 ciphers, and announce 6 as the number thought of.

TO DISCOVER TWO OR MORE NUMBERS THAT A PERSON HAS THOUGHT OF.

First Case.

Where each of the numbers is less than 10. Suppose the numbers thought of were 2, 3, 5.

EXAMPLE.

1. Desire him to double the 1st number, making..... 4
 2. To add 1 to it..... 5
 3. To multiply by 5..... 25
 4. To add the 2d number..... 28
 There being a 3d number, repeat this process—
 5. To double it..... 56
 6. To add 1 to it..... 57
 7. To multiply by 5..... 285
 8. To add the 3d number..... 290
 And to proceed in the same manner for as many numbers as were thought of. Let him tell you the last sum produced (in this case, 290). Then, if there were two numbers thought of, you must subtract 5; if three, 55; if 4, 555. You must here subtract 55, leaving a remainder of 235, which are the numbers thought of, 2, 3, and 5.

Second Case.

Where one or more of the numbers are 10, or more than 10, and where there is an odd number of numbers thought of.

Suppose he fixes upon five numbers, viz., 4, 6, 9, 15, 16.

He must add together the numbers as follows, and tell you the various sums:

1. The sum of the 1st and 2d..... 10
 2. The sum of the 2d and 3d..... 15
 3. The sum of the 3d and 4th..... 24
 4. The sum of the 4th and 5th..... 31
 5. The sum of the 1st and last..... 20

You must then add together the 1st, 3d, and 5th sums, viz., 10 + 24 + 20 = 54, and the 2d and 4th, 15 + 31 = 46; take one from the other, leaving 8. The half of this is the first number, 4; if you take this from the sum of the

1st and 2d you will have the 2d number, 6; this taken from the sum of the 2d and 3d will give you the 3d, 9; and so on for the other numbers.

How Many Counters have I in My Hands?

A person having an equal number of counters in each hand, it is required to find how many he has altogether.

Suppose he has 16 counters, or 8 in each hand. Desire him to transfer from one hand to the other a certain number of them, and to tell you the number so transferred. Suppose it be 4, the hands now contain 4 and 12. Ask him how many times the smaller number is contained in the larger; in this case it is three times. You must then multiply the number transferred 4, by the 3, making 12, and add the 4, making 16; then divide 16 by the 3 *minus* 1; this will bring 8, the number in each hand.

In most cases fractions will occur in the process: when 10 counters are in each hand and if 4 be transferred, the hands will contain 6 and 14.

He will divide 14 by 6 and inform you that the quotient is $2\frac{2}{3}$ or $2\frac{1}{2}$.

You multiply 4 by $2\frac{1}{2}$, which is $9\frac{1}{2}$.

Add 4 to this, making $13\frac{1}{2}$, equal to $\frac{27}{2}$.

Subtract 1 from $2\frac{1}{2}$, leaving $1\frac{1}{2}$ or $\frac{3}{2}$.

Divide $\frac{27}{2}$ by $\frac{3}{2}$, giving 10, the number in each hand.

The Three Travellers.

Three men met at a caravansary or inn, in Persia; and two of them brought their provisions along with them, according to the custom of the country; but the third, not having provided any, proposed to the others that they should eat together, and he would pay the value of his proportion. This being agreed to, A produced 5 loaves, and B 3 loaves, all of which the travellers ate together, and C paid 8 pieces of money as the value of his share, with which the others were satisfied, but quarrelled about the division of it. Upon this the matter was referred to the Judge, who decided impartially. What was his decision?

At first sight it would seem that the money should be divided according to the bread furnished; but we must consider that, as the 3 ate 8 loaves, each one ate $2\frac{2}{3}$ loaves of the bread he furnished. This from 5 would leave $2\frac{1}{3}$ loaves furnished the stranger by A; and $3 - 2\frac{2}{3} = \frac{1}{3}$ furnished by B, hence $2\frac{1}{3}$ to $\frac{1}{3} = 7$ to 1, is the ratio in which the money is to be divided. If you imagine A and B to furnish, and C to consume all, then the division will be according to amounts furnished.

The Money Game.

A person having in one hand a piece of gold, and in the other a piece of silver, you may tell in which hand he has the gold, and in which the silver, by the following method: Some value, represented by an even number, such as 8, must be assigned to the gold; and a value represented by an odd number, such as 3, must be assigned to the silver; after which, desire the person to multiply the number in the right hand by any even number whatever, such as 2, and that in the left by an odd number, as 3; then bid him add together the two products, and if the whole sum be odd, the gold will be in the right hand, and the silver in the left; if the sum be even, the contrary will be the case.

To conceal the artifice better, it will be sufficient to ask whether the sum of the two products can be halved without a remainder; for in that case the total will be even, and in the contrary case odd.

It may be readily seen that the pieces, instead of being in the two hands of the same person, may be supposed to be in the hands of two persons, one of whom has the even number, or piece of gold, and the other the odd number, or piece of silver. The same operations may then be performed in regard to these two persons, as are performed in regard to the two hands of the same person, calling the one privately the right, and the other the left.

The Philosopher's Pupil.

To find a number of which the half, fourth, and seventh, added to three, shall be equal to itself.

This was a favorite problem among the ancient Grecian arithmeticians, who stated the question in the following manner: "Tell us, illustrious Pythagoras, how many pupils frequent thy school?" "One-half," replied the philosopher, "study mathematics, one-fourth natural philosophy, one-seventh observe silence, and there are three females besides."

The answer is, 28: $14 + 7 + 4 + 3 = 28$.

The Certain Game.

Two persons agree to take, alternately, numbers less than a given number, for example, 11, and to add them together till one of them has reached a certain sum, such as 100. By what means can one of them infallibly attain to that number before the other?

The whole artifice in this consists in immediately making choice of the numbers 1, 12, 23, 34, and so on, or of a series which continually increases by 11, up to 100. Let us suppose that the first person, who knows the game, makes choice of 1; it is evident that his adversary, as he must count less than 11,

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can at most reach 11, by adding 10 to it. The first will then take 1, which will make 12; and whatever number the second may add the first will certainly win, provided he continually add the number which forms the complement of that of his adversary to 11; that is to say, if the latter take 8, he must take 3; if 9, he must take 2; and so on. By following this method he will infallibly attain to 89, and it will then be impossible for the second to prevent him from getting first to 100; for whatever number the second takes he can attain only to 99; after which the first may say—"and 1 makes 100." If the second take 1 after 89, it would make 90, and his adversary would finish by saying—"and 10 make 100." Between two persons who are equally acquainted with the game, he who begins must necessarily win.

The Famous Forty-five.

How can number 45 be divided into four such parts that, if to the first part you add 2, from the second part you subtract 2, the third part you multiply by 2, and the fourth part you divide by 2, the sum of the addition, the remainder of the subtraction, the product of the multiplication, and the quotient of the division, be all equal?

The first is 8; to which add 2, the sum is 10
 The second is 12; subtract 2, the remainder is 10
 The third is 5; multiplied by 2, the product is 10
 The fourth is 20; divided by 2, the quotient is 10

45

Required to subtract 45 from 45, and leave 45 as a remainder.

Solution.—
$$\begin{array}{r} 9+8+7+6+5+4+3+2+1=45 \\ 1+2+3+4+5+6+7+8+0=45 \\ \hline 8+6+4+1+9+7+5+3+2=45 \end{array}$$

The Astonished Farmer.

A and B took each 80 pigs to market. A sold his at 3 for a dollar, B at 2 for a dollar, and together they received \$25. A afterwards took 80 alone, which he sold as before, at 5 for \$2, and received but \$24; what became of the other dollar?

This is rather a catch question, the insinuation that the first lot were sold at the rate of 5 for \$2, being only true in part. They commenced selling at that rate, but after making ten sales, A's pigs are exhausted, and they have received \$20; B still has 10 which he sells at "2 for a dollar," and of course receives \$5; whereas, had he sold them at the rate of 5 for \$2, he would have received but \$4. Hence the difficulty is easily settled.

The Expunged Figure.

In the first place desire a person to write down secretly, in a line, any number of figures he may choose, and add them together as units; having done this, tell him to subtract that sum from the line of figures originally set down; then desire him to strike out any figure he pleases, and add the remaining figures in the line together as units (as in the first instance), and inform you of the result, when you will tell him the figure he has struck out.

76542-24

24

76518

Suppose, for example, the figures put down are 76542; these added together, as units, make a total of 24; deduct 24 from the first line, and 76518 remain; if 5, the centre figure, be struck out, the total will be 22. If 8, the first figure, be struck out, 19 will be the total.

In order to ascertain which figure has been struck out, you make a mental sum one multiple of 9 higher than the total given. If 22 be given as the total, then 3 times 9 are 27, and 22 from 27 show that 5 was struck out. If 19 be given, that sum deducted from 27 shows 8.

Should the total be equal multiples of 9, as 18, 27, 36, then 9 has been expunged.

With very little practice any person may perform this with rapidity; it is therefore needless to give any further examples. The only way in which a person can fail in solving this riddle is, when either the number 9 or a 0 is struck out, as it then becomes impossible to tell which of the two it is, the sum of the figures in the line being an even number of nines in both cases.

The Remainder.

A very pleasing way to arrive at an arithmetical sum, without the use of either slate or pencil, is to ask a person to think of a figure, then to double it, then add a certain figure to it, now halve the whole sum, and finally to subtract from that the figure first thought of. You are then to tell what is the remainder.

The key to this lock of figures is, that *half* of whatever sum you request to be added during the working of the sum is the remainder. In the example given, 5 is the half of 10, the number requested to be added. Any amount may be added, but the operation is simplified by giving only even numbers, as they will divide without fractions.

Think of.....	7
Double it.....	14
Add 10 to it.....	10
Halve it.....	2)24
Which will leave.....	12
Subtract the number thought of.....	7
The remainder will be.....	5

The Three Jealous Husbands.

Three jealous husbands, A, B, and C, with their wives, being ready to pass by night over a river, find at the waterside a boat which can carry but two at a time, and for want of a waterman they are compelled to row themselves over the river at several times. The question is, how those six persons shall pass, two at a time, so that none of the three wives may be found in the company of one or two men, unless her husband be present?

This may be effected in two or three ways; the following may be as good as any: Let A and wife go over—let A return—let B's and C's wives go over—A's wife returns—B and C go over—B and wife return, A and B go over—C's wife returns, and A's and B's wives go over—then C comes back for his wife. Simple as this question may appear, it is found in the works of Alcuin, who flourished a thousand years ago, hundreds of years before the art of printing was invented.

A FEW SIMPLE CONJURING TRICKS.

The Obedient Dime.

Put a dime between two half dollars and place upon the larger coins a glass (goblet or tumbler) upside down. The trick consists in removing the dime without displacing either of the larger coins or the glass. The player has simply to scratch the tablecloth with the nail of the forefinger in the direction he wishes the dime to move and it will respond instantly. The elasticity of the cloth causes this action. The tablecloth is essential to the trick.

The "Twenty-Cent" Trick.

The performer borrows twenty cents from the assembled guests, children, or hostess and displays it on a plate, having previously, however, prepared five cents in his left hand, which he must keep concealed.

Then he will take the cents from the plate in his right hand, and mixing them with the hidden five, give them to some one in the audience to hold. Then he must ask the holder of the coins to return five cents to him, which he will naturally do, under the impression that he then has only fifteen, whereas, of course, he still possesses twenty.

Now, the performer of the trick must have another cent palmed in his right hand, so that as he hands the five cents just returned to another player to hold, he may mix the cent with it, thus giving him six cents. Then he must ask the recipient of the six cents to return one, and he must be reminded that he has now only four left, and must then proceed with the most marvellous part of the illusion.

Taking the one cent just received in the right hand, he must palm it, pretending, however, to place it in the left. Then he must strike the left hand with a rod, bidding the cent fly into the closed hand of the person holding five, the one who thinks he has only four. On unclosing the hand the five cents will appear in his palm as if transferred there by magic, and the holder of the sum, with the rest of the audience, be surprised beyond expression.

The performer will then proceed, taking the other five cents, and, making a still more dexterous pass into the left hand, he will bid the five cents to fly to the closed hand of the person holding the other pennies, and who will now be asked to return the original twenty cents. This he will do, to the great astonishment of himself and the remainder of the audience.

This trick, when properly practised and executed with proper care and dexterity, is extremely effective.

Rising of Water in a Glass.

Take a goblet, a plate and some water. Pour the water on the plate and inform the audience that it will rise in the glass. To accomplish this, place a piece of cork on the water and upon this some paper, light it and put the goblet upside down over the flame. The water will then begin to rise very slowly in the glass.

The explanation is, as the paper burns it will consume a portion of the air, and thus, the resistance being diminished, the external pressure will send the water up.

Fill a Goblet with Water and Hold it Upside Down without Spilling.

Take a goblet and fill it with water, then cover it with a piece of paper so that it will fit perfectly the rim of the glass and adhere to the water thereon.

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Turn the glass quickly upside down and it will be seen that the water does not escape. The sheet of paper will prevent the water from spilling because it is held back by the pressure of air.

The Domino Oracle.

Arrange twelve of the dominoes in a circle, beginning with the double six in the middle, then 6.5, double 5, 5.4, double 4, and so on ending with one blank, and inform any one present, that if he will think of one of the dominoes and remember it, you will point it out to him. Now, supposing the double-deuce is the domino selected, you tell the person who has chosen it that you will count around the circle, and when you have counted twenty, *including the number of spots on the selected domino*, he must tell you to stop, and that your finger will then rest on the domino chosen. The secret is simply this,—you count carelessly around, 1, 2, 3, 4, 5, 6, 7, on any of the dominoes; but at the eighth count you always manage to point to the *double-six*, and after that you continue counting around *regularly to the right*; be sure and remember this, for it is the key of the trick. For example, as we have before said, we will suppose the double-deuce to be the selected domino. We follow the above instructions, and count and point at the dominoes *promiscuously* the first seven counts; but at eighth count we point at the double-six, and continue to the right on the six-five, double-five, and so on in succession until we arrive at the double-deuce, when we will be told to stop, because by that time we will have counted sixteen, to which if we add the spots on the domino chosen we will have twenty. This rule holds good no matter what domino happens to be selected. It is perhaps useless to inform our reader that he must not count out loud, or appear to count mentally, but let it seem as if he were only pointing at the dominoes by chance. You must let the person who selects the domino appear to do all the counting.

To Guess the Two Ends of a Line of Dominoes.

Cause a set of dominoes to be shuffled together as much as any of the company may desire. You propose to leave the room in which the audience are assembled, and you assert that from your retreat, be it where it may, you can see, and will be able to tell, the two numbers forming the extremes of a line composed of the entire set, according to the rules established for laying the domino after another in a draw game.

All the magic consists in taking up and carrying away, unknown to every one, one domino (not a double) taken at hazard; for the two numbers on it must be the same as those on the ends of the two outer dominoes. This experiment may be renewed, *ad infinitum*, by your taking each time a different domino, which, of course, changes the numbers to be guessed.

ACTING CHARADES.

In nearly every gathering of young people there will be found some who have taken part in this popular amusement. Therefore, a few words of general advice need only be given here. The main object is to mystify the audience, but the syllable of the word must be mentioned, though it need not be brought in in a pointed manner or pronounced with emphasis.

Let all your arrangements be well planned and thought out. Decide who is to bring in the syllable or the word, and see that every one has the subject of the act well in mind. The scenes should be short and should follow quickly. Following are a few good words:—Mis-take, Band-box, Man-age, Brides-maid, Cur-tail, Hand-some, Mar-plot, Mad-cap, Sea-side, Bride-groom, Key-hole, Pat-riot, In-constant, Rail-way, Stage-struck, Sweet-heart, Nose-gay, Fox-glove, Mis-fortune, Turn-key, In-no-cent, A-bun-dance, Purse-proud, Mat-ri-mony, Car-pen-try, In-do-lent. But a very brief consultation of the dictionary will suggest others as simple, and many more difficult.

The scenery, costume, and accessories depend of course upon the resources of the house and the ingenuity of the players, and they may be simple or as elaborate as possible. Part of the fun is often the improvising of the costumes, etc. A curtain is almost a necessity, and a back drawing room forms an excellent stage, with the audience seated in the front and the curtain in the space for the folding doors which we have often seen used instead of a curtain.

CHESS.

BY

BENJAMIN FRANKLIN.

FIRST, foresight, which looks a little into futurity, and considers the consequences which may attend an action, as it is continually occurring to the player. 'If I move this piece, what will be the advantage of my new situation? what use can my adversary make of it to annoy me? what other moves can I make to support it, and to defend myself from his attack?' Second, the circumspection which surveys the whole chessboard, or scene of action, and the relation of the several pieces, and considers the dangers they are respectively exposed to, the several possibilities of aiding each other, the probability that the adversary may take this or that move, and take this or the other piece, and what different means can be used to avoid his stroke, or turn its consequences against him. Third, caution not to make our moves too hastily. This habit is best acquired by observing strictly the laws of the game, such as, if you touch a piece you must move it somewhere; if you set it down you must let it stand; and it is therefore best that these rules be observed, as the game thereby becomes so much the more like human life, and particularly of war, in which, if you have incautiously put yourself into a bad or dangerous position, you cannot obtain your enemy's leave to withdraw your troops, and place them in more security, but must abide the consequences of your folly."

DESCRIPTION OF THE GAME.

The board is square and that portion of its surface contained inside the board (which is all the better if slightly raised) is divided into sixty-four equal squares, so arranged that there are eight of these squares on each of the four sides of the board; from whatever side the board is viewed, therefore, it presents eight rows of eight equal squares each. These squares are colored black and white alternately.

There are thirty-two men. Of these each of the two players taking part in the game takes sixteen, and one set of men is colored white and the other black, or red. Each set of sixteen consists of eight *pieces* and eight *pawns*, viz.:

The King, the Queen, two Rooks, two Bishops, two Knights, and eight Pawns.

The Relative Value of Pieces and Pawns.

The Pawn has the least value of all chessmen.

The Bishop and Knight are called *Minor* pieces. Of these the Knight is worth rather more than three Pawns, and the Bishop rather more than the Knight. These, however, are considered as equal in value, except in end games, when two Bishops are usually found much stronger than two Knights. And the difference lies in the fact that whereas two of the former alone can force checkmate, two Knights cannot do so.

The Rook equals in value a Minor piece and two Pawns, except in end games, when, if the Pawns are united, the Minor piece and two Pawns should generally win. A player is said to win *the exchange* when he gains a Rook for a Minor piece.

Two Rooks are about the same value as three Minor pieces.

The Queen in ordinary games is of rather more value than two Rooks; in end games, however, she is of rather less value. Sometimes she equals three Minor pieces.

The King cannot be captured, and is therefore invaluable.

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The comparative values indicated above vary somewhat with *position*, but indicate in a general way what advantages are gained by them.

Method of Naming the Men and Squares.

In printed games and problems the following notation is generally in use: The pieces on the side of each King furthest from the Queen are called the King's pieces, and those on the side of the Queen furthest from the King are called the Queen's pieces. King's Bishop, King's Knight, and King's Rook are usually distinguishable from the Queen's Bishop, Queen's Knight, and Queen's Rook by a separate mark stamped on them. The Pawns belong to the pieces in front of which they stand, and are named after those pieces. Thus the Pawn in front of the Queen is called the Queen's Pawn, the Pawn in front of the King's Rook is called the King's Rook's Pawn, and so on.

In writing or printing a game, the men are designated in the following manner:

	is indicated thus	
King	"	K
Queen	"	Q
Bishop	"	B
Knight	"	Kt
Rook	"	R
King's Bishop	"	K B
King's Knight	"	K Kt
King's Rook	"	K R
Queen's Bishop	"	Q B
Queen's Knight	"	Q Kt
Queen's Rook	"	Q R
Pawn	"	P
King's Pawn	"	K P
Queen's Pawn	"	Q P
King's Bishop's Pawn	"	K B P
King's Knight's Pawn	"	K Kt P
King's Rook's Pawn	"	K R P
Queen's Bishop's Pawn	"	Q B P
Queen's Knight's Pawn	"	Q Kt P
Queen's Rook's Pawn	"	Q R P

Similarly the squares on which each man stands at the starting of a game is designated by the name of that man. Thus the Queen stands on the Queen's square, and the King's Bishop on the King's Bishop's square, and so on. The squares running from left to right when the board is in position for play (see Regulation 1) are called *rows*, or *ranks*; the rows of squares running from one corner of the board to the other, or parallel rows to them are termed *diagonals*; while the rows of squares running at right angles to each player are called *files*. These *files* take the names of the pieces from which they start; thus the file starting from the piece directly on the left of the Queen is called the Queen's Bishop's file, and soon. The squares of each file are for convenience numbered from 2 to 8, so that a man which stands on any square of a given file, say the fourth square of King's Bishop's file (that is the third square in front of King's Bishop, not reckoning its own square) is said to stand on King's Bishop's fourth (printed K B's 4th), and so on. This method of reckoning is adopted for both players, and always from the original position of each player's pieces, so that, taking a given square of Black's Men, say King's 2d, that square reckoned from White's side of the board would be King's seventh, and so on for all the remaining squares.

The only other abbreviations used are ch. (for "check"), dis. ch. (for "discovered check"), and sq. (for "square"). The latter, however, is never used, except when a move is made back to a square from which a piece originally started, or to a square originally occupied by any other piece; its use therefore is confined to the *first rank* of squares.

Whenever a piece or a Pawn can move to a given square, or can effect a capture, it is not necessary to specify which piece or Pawn does this, unless the move or capture may be made by more than one piece or Pawn.

DESCRIPTION OF THE MOVES.

The King.—When the King cannot move, that is, when a player checkmates the King, the game is lost by the owner of that King. The King is the only piece which cannot be taken. He moves in any direction—forward, backward, laterally, and diagonally—but only one square at a time, except once in the game, viz., when he exercises his privilege of Castling, and then he may move two squares. Castling is permitted only once, and only, (a) if the King is not in check; (b) if the King and Rook have not previously been moved, or if the latter has been first touched, and quitted before the King is moved; (c) if the King in Castling has neither to alight on, nor to pass over a square guarded by a hostile man; (d) if the squares between the King and the Rook are not occupied by a piece belonging to either player; and (e) if the King's move is not a penalty. In Castling on the King's side, the King is on King's Knight's square, and the King's Rook on King's Bishop's square; in Castling on the Queen's side, the King is placed on Queen's Bishop's square, and the Queen's Rook on Queen's square.

The King is not allowed to move on to any square guarded by a hostile man, nor to any square adjacent to the hostile King. Neither King is allowed to attack the hostile King.

The King is in *check*, when he is attacked by a piece or Pawn, and whenever this occurs (a) the King must be moved out of check, (b) a piece or Pawn must be interposed between the hostile man and the King, or (c) the attacking man must be taken. Should none of these be possible the King is *checkmated* and the game is lost. There are four ways of giving check:

- (1) By attacking the King with a single piece or Pawn. This is *Simple Check*.
- (2) By attacking the King indirectly, that is by moving a man which interposes between the King and an attacking piece. This is *Discovered Check*.
- (3) By attacking the King with the man moved as well as by a *Discovered Check*. This is *Double Check*.
- (4) By *Perpetual Check*, which is when the King is in check from two or more squares, and cannot avoid these without placing himself in check elsewhere.

This last check is really checkmate, provided no man can be interposed, and none of the checking men can be taken.

The Queen is allowed to move in any direction and any number of squares at a time. She is the most powerful piece on the board.

The Rook comes next in power, being allowed to move any number of squares at a time in any direction *except diagonally*. His course is through the ranks and files.

The Bishop may move diagonally any number of squares, of its own color—always.

The Knight's movements are peculiar, being made up of two steps, as it were, one diagonal and the other straight. He always rests on a square of the opposite color from which he starts, and may leap over a man in the process—that is, a man occupying the square which is the Knight's first step is no hindrance to his move.

The Pawn, except in his first move (which may be two squares), is only allowed to take one square at a time in a forward direction. He is the only man capable of promotion, which takes place at the player's option when he has reached the eighth square of the file. The promotion is called *Queening* (that being the general choice), but cannot be made later than the stage mentioned. When the Pawn is on the march, he goes forward; but when he takes he does so diagonally, and is moved forward one square in the file to the right or left according to the side on which he takes. When two Pawns of the same color are on the same file, the forward one is called a *Doubled Pawn*. A *Passed Pawn* is one between which and the eighth square of his own file, or the eighth square of each of the adjacent files there stands no hostile Pawn. The term *en passant* is best described here, as it applies only to a Pawn. It must be enforced by a Pawn directly a hostile Pawn has passed him in the exercise of his privilege of taking two squares as a first move.

DESCRIPTION OF TECHNICAL TERMS.

Castling. See under "King."

Check and Checkmate. See under "King."

Stalemate is when the King, although not in check, is unable to move *without going into check*; and when no other man can be moved. *Stalemate* is always a draw.

Smothered Mate is when a King cannot move through being surrounded by his own men, and cannot ward off the attack of the hostile Knight.

En prise is the being exposed to capture.

Forced move is having only a single move at one's disposal.

False Move is the contravention by any man of its own proper move by moving like another man, or Castling illegally.

Gambit. This word means to *trip up*. It describes particular openings where a Pawn is put *en prise* in an early move for the purpose of some advantage later. There are the Allgairr Gambit, the Cochrane Gambit, the Evans Gambit, the King's Gambit, and the Muzio and Salvio Gambits.

Drawn Game. This is possible in several ways:—(a) from Insufficient Force, (b) Perpetual Check, or, as stated above, (c) from Stalemate.

LAWS AND REGULATIONS OF THE GAME.

The Game of Chess has its Laws, but these cannot be exhaustively set out in small compass on the printed page, inasmuch as they affect the analysis of openings, of endings, and of problems—and these are as endless as the possible combinations connected with the game. The most important of these, however, are known and may be set forth; but most writers—even down to quite recently—confound the term "Laws of the Game" with the term "Regulations of the Game." The former belong to the nature of the game, and cannot alter; the latter are merely those rules which various clubs and associations have formulated in reference to the exterior policy of the game, and are quite independent of the game itself, and may vary with the prevailing fashion.

REGULATIONS OF THE GAME.

1. *The Chess Board*.—The board must be so placed during play that each combatant has a white square in his right-hand corner. If, during the progress of a game, either player discovers that the board has been improperly placed, he may insist on its being adjusted.

2. *The Chessmen*.—If, at any time in the course of a game, it is found that the men were not properly placed, or that one or more of them were omitted at the beginning, the game in question must be annulled. If at any time it is discovered that a man has been dropped off the board, and moves have been made during its absence, such moves shall be retracted, and the man restored. If the players cannot agree as to the square on which it should be placed, the game is annulled.

3. *Right of Move and Choice of Color*.—The right of making the first move, and (if either player require it) of choosing the color, which shall be retained throughout the sitting, must be decided by lot. In any series of games between the same players at one sitting, each shall have the first move alternately in all the games, whether won or drawn. In an annulled game, the player who had the first move in that game shall move first in the next.

4. *Commencing out of Turn*.—If a player make the first move in a game when it is not his turn to do so, the game must be annulled if the error has been noticed before both players have completed the fourth move. After four moves on each side have been made, the game must be played out as it stands.

5. *Playing two Moves in Succession*.—If, in the course of a game, a player move a man when it is not his turn to play, he must retract the said move; and after his adversary has moved, must play the man wrongly moved, if it can be played legally.

6. *Touch and Move*.—A player must never touch any of the men except when it is his turn to play, or except when he touches a man for the purpose of adjusting it: in which latter case he must before touching it, say, "I adjust," or words to that effect. A player who touches with his hand (except accidentally) one of his own men when it is his turn to play, must move it, if it can be legally moved, unless, before touching it, he say, "I adjust," as above; and a player who touches one of his adversary's men, under the same conditions, must take it, if he can legally do so. If, in either case, the move cannot be legally made, the offender must move his King; but in the event of the King having no legal move, there shall be no penalty. If a player hold a man in his hand, undecided on which square to play it, his adversary may require him to replace it until he has decided its destination; that man, however, must be moved. If a player, when it is his turn to play, touch with his hand (except accidentally or in Castling) more than one of his own men, he must play any of them legally movable that his adversary selects. If, under the same circumstances, he touch two or more of the adversary's men, he must capture whichever of them his antagonist chooses, provided it be legally taken. If it happens that none of the men so touched can be moved or captured, the offender must move his King; but if the King cannot be legally moved, there shall be no penalty.

7. *False Moves and Illegal Moves*.—If a player make a false move—that is either by playing a man of his own to a square to which it cannot be legally moved, or by capturing an adverse man by a move which cannot be legally made—he must at the choice of his opponent, and according to the case, either move his own man legally, capture the man legally, or move any other man legally movable. If, in the course of a game, an illegality be discovered (not involving a King being in check) and the move on which it was committed has been replied to, and not more than four moves on each side have been made subsequently, all these latter moves, including that on which the illegality has been committed, must be retracted. If more than four moves on each side have been made, the game must be played out as it stands.

8. *Check*.—A player must audibly say, "Check!" when he makes a move which puts a hostile King in check. The mere announcement of check shall have no signification if check be not actually given. If check be given but not announced, and the adversary makes a move which obviates the check, the move must stand. If check be given and announced, and the adversary neglects to obviate it, he shall not have the option of capturing the checking piece (or pawn), or of covering, but must "move his King" out of check; but if the King have no legal move there shall be no penalty. If in the course of a game it be discovered that a King has been left in check for one or more moves on either side, all the moves subsequent to that on which the check was given must be retracted. Should these not be remembered the game must be annulled.

9. *Enforcing Penalties*.—A player is not bound to enforce a penalty. A penalty can only be enforced by a player before he has touched a man in reply. Should he touch a man in reply, in consequence of a false or illegal move of his opponent, or a false cry of check, he shall not be compelled to move that man, and his right to enforce the penalty shall remain. When the King is moved as a penalty, it cannot Castle on that move.

10. *Castling*.—In Castling, the player shall move King and Rook simultaneously, or shall touch the King first. If he touch the Rook first, he must not quit it before having touched the King; or his opponent may claim the move of the Rook as a complete move. When the odds of either Rook or both Rooks are given,

the player giving the odds shall be allowed to move his King as in Castling, and as though the Rooks were on the board.

11. *Counting Fifty Moves.*—A player may call on his opponent to draw the game, or to mate him within fifty moves on each side, whenever his opponent persists in repeating a particular check, or series of checks, or the same line of play, or whenever he has a King alone on the board, or

King and Bishop.	}	against an equal or superior force.
King and Rook.		
King and Queen.		
King and Knight.		
King and two Knights,	}	against King and Queen.
King and two Bishops,		
King, Bishop, and Knight,		

and in all analogous cases; and whenever one player considers that his opponent can force the game, or that neither side can win it, he has the right of submitting the case to the umpire or bystanders, who shall decide whether it is one for the fifty move counting; should he not be mated within the fifty moves, he may claim that the game shall proceed.

12. *Pawn Taking in Passing.*—Should a player be left with no other move than to take a Pawn in passing, he shall be bound to play that move.

13. *Queening a Pawn.*—When a Pawn has reached the eighth square the player has the option of selecting a piece (not being a King), whether such piece has been previously lost or not, whose name and powers it shall then assume, or of deciding that it shall remain a Pawn.

14. *Abandoning the Game.*—If a player abandon the game, discontinue his moves, voluntarily resign, willfully upset the board, or refuse to abide by these laws, or to submit to the decision of the umpire, he must be considered to have lost the game.

15. *The Umpire or Bystanders.*—The umpire shall have authority to decide any question whatever that may arise in the course of a game, but must never interfere except when appealed to. He must always apply the laws as herein expressed, and neither assume the power of modifying them, nor of deviating from them in particular cases, according to his own judgment. When a question is submitted to the umpire, or to bystanders, by both players, their decision shall be final and binding upon both players. The term bystanders shall comprise any impartial player of eminence who can be appealed to, absent or present.

USEFUL HINTS.

1. *The Queen* should not be brought into play at the commencement of a game if it is possible to avoid this; and when moved early in a game it is generally a bad position for Queen to occupy K B's 3d, unless K B P occupies K B's 4th. Whenever it is thought advisable to attack with the Queen very early in the game, care should be taken to support Q with some other piece.

2. *The Knight*, on the contrary, should be amongst the earliest pieces to be advanced. The strongest positions for K Kt at the opening is K B's 3d, and K B's 5th; the best place for Q Kt is Q's 5th.

3. *The Bishop*, too, should be very early in the fight.

4. *The Rook*, however, is of more value toward the ending of a game. His best position is the seventh square of any of his own men.

5. *The Pawns.*—(a) The King's Bishop's Pawn is the Key of the entire position. It should therefore be the first to be attacked and defended. King's Knight placed at K B's 3d is a great protection to K B P. (b) The next important position for attack and defence is the Queen's Bishop's Pawn. (c) At the commencement of a game get the front Pawns well established in the centre. (d) When two Pawns are established respectively in front of King and Queen's fourth square, all idea of attacking should be given up until these two Pawns are well supported. (e) The advantages a player has over his adversary by securing the front and the centre of King and Queen's Pawn, are: 1st, His adversary's King's Bishop will be excluded and thus unable to attack his Bishop's Pawn; 2d, His adversary's Queen's Pawn is considerably circumscribed; and 3dly, His own game will be disposed upon four parallel lines, and his adversary's on three only. (f) The origin and importance of the King's and Queen's Gambit arise from the importance of changing off the King's Bishop's and Queen's Bishop's Pawns. (g) The importance of the proper manipulation of the Pawns cannot be overestimated. Beginners, therefore, and those more advanced should master all the openings given in the best Chessplayers' Books, and should also, by play with those who have made considerable progress, do their utmost to understand thoroughly the art of Pawn play, which Philidor has tersely named "the soul of chess."

CHECKERS OR DRAUGHTS.

DESCRIPTION OF THE GAME.

IT is generally thought that of the two games, Chess and Draughts, the latter is the older game, and as, according to a no less eminent authority than Sir W. Jones, the former is about 4,000 years old, if draughts preceded and is the foundation of chess, its antiquity is very great. Both games, however, came from the ages when war was the chronic state among mankind, and seem to show that the moments of peace and recreation were utilized to keep alive the idea of conflict and conquest. The general use of draughts in Europe was not until the middle of the sixteenth century. Previous to 1670 one or two treatises on the game were published by scholars of some eminence, but after that date nothing appeared until 1800, when the next able work on the game, written by Joshua Sturges, was published.

Since then, however, both in Great Britain and America, several valuable treatises have appeared, and the game is known—to some extent—almost universally. Scientifically, however, it is not known nearly so well as it deserves to be.

The board on which the game is played contains sixty-four equal squares, and is the same board as that used for chess. There are twelve pieces for each of the two players, those belonging to the *first* side—the side which always begins the game—being red or black, and the twelve belonging to the *second* side being white. Any piece of either player which has either of its adjacent squares *behind* it vacant or unprotected may be taken by a piece of the opposite player which is adjacent to and in front of that piece, provided it be the opponent's next move; and he loses the game whose pieces are either all taken first, or whose remaining pieces can either not move at all, or not move without being captured.

The men are allowed to move only one square at a time and in a forward direction, until they have reached one of the squares at the extreme end of the board, and opposite to that from which the men started. Thence they may move in any direction, but only one square at a time.

A man may capture as many pieces as are exposed by having the alternate squares behind them vacant, provided it be legal for the man to move in their direction. The capturing piece rests on the vacant square beyond the last man so exposed.

When the board is in position in accordance with Law 2, the black squares, that is, the squares on which the men are placed, are numbered (mentally) from right to left, and from 1 to 32. This enables the various games and problems to be written, printed, or verbally described readily.

STANDARD LAWS OF THE GAME.

1. The Standard Board must be of light and dark squares, not less than fourteen and one-half inches, nor more than sixteen inches across said squares.

2. The board shall be placed so that the bottom corner square on the left hand shall be black.

3. The Standard men, technically described as Black and White, must be light and dark (say red and white, or black and white), turned and round, and not less than one and one-eighth inch, or more than one and one-fourth inch in diameter.

4. The men shall be placed on the black squares.

5. The black men shall invariably be placed upon the real or supposed first twelve squares of the board; the white men upon the last twelve squares.

6. Each player shall play alternately with black and white men and lots shall be cast for the color only once—viz., at the commencement of a match—the winner to have the choice of taking either black or white.

7. The first move must invariably be made by the one having the black men.

8. At the end of five minutes (if the move has not been previously made), "Time" must be called in a distinct manner, by the person appointed for the purpose; and if the move be not completed on the expiry of another minute, the game shall be adjudged lost through improper delay.

9. When there is only one way of taking one or more pieces, "Time," shall be called at the end of one minute; and if the move be not completed on the expiry of another, the game shall be adjudged lost through improper delay.

10. Either player is entitled, on giving intimation, to arrange his own or his opponent's pieces properly on the squares. After the first move has been made, however, if either player touch or arrange any pieces without giving intimation to his opponent, he shall be cautioned for the first offence, and shall forfeit the game for any subsequent act of the kind.

11. After the pieces have been arranged, if the person whose turn it is to play touch one, he must either play it or forfeit the game. When the piece is not playable, he is penalized according to the preceding law.

12. If any part of a playable piece be played over an angle of the square on which it is stationed, the play must be completed in that direction.

13. A capturing play, as well as an ordinary one, is completed whenever the hand is withdrawn from the piece played, even though two or more pieces should have been taken.

14. When taking, if a player remove one of his own pieces, he cannot replace it; but his opponent can either play or insist on his replacing it.

15. Either player making a false or improper move, shall instantly forfeit the game to his opponent, without another move being made.

16. The "Huff" or "Blow" is, before one plays his own piece, to remove from the board any one of the adverse pieces that might or should have taken. But the "Huff" or "Blow" never constitutes a play.

17. The player has the power to huff, compel the taker, or to let the piece remain on the board, as he thinks proper.

18. When a man first reaches any of the squares on the opposite extreme line of the Board it becomes a "King," and can be moved backwards or forwards as the limits of the Board permit (though not in the same play), and must be crowned (by placing a man on the top of it) by the opponent; if he neglect to do so, and play, any such play shall be put back until the man be crowned.

19. A Draw is when neither of the players can force a win. When one of the sides appears stronger than the other, the stronger party is required to complete the win, or to show, to the satisfaction of the umpire or referee, at least a decided advantage over his opponent within forty of his own moves—to be counted from the point at which notice was given—failing in which, he must relinquish the game as a draw.

20. Anything which may tend either to annoy or distract the attention of the player is strictly forbidden—such as making signs or sounds, pointing or hovering over the board, unnecessarily delaying to move a piece touched, or smoking. Any principal so acting, after having been warned of the consequence, and requested to desist, shall forfeit the game.

21. While a game is pending, neither player is permitted to leave the room without a sufficient reason, or receiving the other's consent or company.

22. Any spectator giving warning, either by sign, sound, or remark, on any of the games, whether played or pending, shall be ordered from the room during the match, and play may be discontinued until such offending party retires.

23. A match between equals, wins and draws to count, should consist of an even number of games, so that each player may have the first move the same number of times.

24. Either player committing a breach of any of these laws must submit to the penalty, and his opponent is equally bound to exact the same.

25. Should any dispute occur not satisfactorily determined by the preceding laws, a written statement of facts must be sent to a disinterested arbiter, having a knowledge of the game, whose decision shall be final.

"The Move"—Its Theory and Changes.

"The Move" is a technical term signifying that the player who has it gets

the last move and can, in the course of a certain number of moves, confine his opponent's pieces so that the latter is practically helpless. Generally "The Move" wins the game; sometimes it only secures a "draw"; and sometimes, though rarely, the player who happens to have "The Move" loses the game.

Now it is possible by certain methods of calculation to know beforehand whether "The Move" will win or not. To do this the black squares are mentally divided into two series of four columns each and numbered consecutively from right to left. In the one series the columns are added up from the first square in Black's nearest row, viz., from the squares numbered 1, 2, 3, and 4. In the other series, the four columns are added from White's first square in the nearest row, viz., from the squares numbered 29, 30, 31, and 32.

Taking the above columns *upwards*, the squares numbered 1, 9, 17, 25; 2, 10, 18, 26; 3, 11, 19, 27; 4, 12, 20, 28, form Black's series of columns; while White's series of columns taken *downward* include the squares numbered 29, 21, 13, 5; 30, 22, 14, 6; 31, 23, 15, 7; and 32, 24, 16, 8. The numbers used above are only taken to indicate the two series, and are not to be added up in the mind of the player—it is only the number of pieces which happen to be in any or all of these columns that are to be counted. In other words the two series might have been indicated by two sets of letters (large and small) quite as well as by numbers.

Now whenever the players have an equal number of pieces—whether each have an odd or even number—it is evident that the *total number of pieces* are always even; and as an *even number* can only be divided into *two even* or *two odd* numbers, it is equally clear that when the pieces in each of the series are separately counted they will be both either even or odd.

Now as the players move, each of their moves must be out of one series into the other, making a difference of one more in the one series and one less in the other. Consequently, if before a given move the sum of the pieces in each system was odd, they will each be even after the move; after a second move, they will each be odd again and so on alternately—always provided a move does not take a man off the board.

RULE 1.—If when it is your turn to play you wish to know whether you have "The Move," take the sum of the pieces, both Black and White, in *either* (not both) series of squares, and if their sum is odd, you have "The Move"; if even, your opponent has "The Move." [Another way of putting this Rule is: If one or more columns in either series contain only one piece or only one vacant square, then if the sum of these vacant pieces or vacant squares be odd, you have "The Move," if even, your opponent has "The Move."

In using the second form of this Rule you will (a) never count more than one piece or vacant square in any given column, (b) never get a greater number than *three* when you have "The Move," or *four* when you have not "The Move."

At the beginning of a game "The Move" is with the second player, but it cannot at so early a stage be taken advantage of. Generally speaking an exchange alters "The Move"—that is you may obtain "The Move" by giving a piece in exchange for another; and any of the remaining Rules will enable a player to find what kind of exchanges either fail or succeed in changing "The Move."

RULE 2.—When the sum of the capturing pieces is even and in reverse series, and the sum of the captured pieces is odd on each side, "The Move" is changed; but if the capturing pieces are all in the same series, it is not changed.

RULE 3.—When the sum of the capturing pieces is even and that of the captured pieces is even on each side, "The Move" is not changed.

RULE 4.—When the sum of the capturing pieces is odd and that of the captured pieces is even in each system, "The Move" is changed; but if the latter is odd it is not changed.

RULE 5.—This Rule is of universal application in the most complex positions. When the sum of *all* the capturing pieces in both series is the same as the sum of the captured pieces in each series—that is both even or both odd—"The Move" is not changed; but if the one is odd and the other even it is changed.

Useful Hints.

Beginners should play slowly and if possible with an opponent who will, if necessary, allow more than the standard time for considering a move.

Generally speaking it is preferable to keep your men near the middle of the board rather than on the side squares.

Never touch a piece without moving it, and accustom yourself to play promptly any move, when your mind is made up.

See that the Laws of the Game are rigorously enforced whether by yourself or opponent.

Prefer as opponents superior players to yourself, and always accept the odds which a superior player offers.

If a player offers one man in a game as odds, the disparity between the opponents is, or should be considerable. The usual odds is a man in a rubber of three games.

There ought to be a motive for every move, consequently the result of any given move should be seen before it is taken.

Make a King as early in the game as possible.

If a skilful player, never mention it; and if you lose or win the game let the former be without resentment, and the latter with quiet modesty.

Never play for money, on the one sole and sufficient ground that one individual has no right to take value from another except in exchange for equal value. The fact that he agrees to risk makes no difference to the inequity (*iniquity*) of the proceeding. If it is not absolutely dishonest, gambling is intensely selfish.

DOMINOES.

DESCRIPTION OF THE GAME.

DOMINOES is often considered, by those who have never played it, as a trivial amusement, and almost incapable of yielding any real enjoyment; whereas, in reality, in some of its possibilities, it is capable of affording exercise for the mind equal to many branches of mathematics. There is room in dominoes for calculation and skill—in fact, the game is nothing without them. Hence it, like other games of skill, is a source of mental recreation.

There are twenty-eight pieces in an ordinary set of dominoes—called *cards*. In some parts it is not unusual to find fifty-two, and even eighty-five pieces, according as the set is limited by the double nine or the double twelve. The principles of play, however, are the same whether the set be the ordinary twenty-eight set, or the extraordinary sets referred to.

There are certain preliminary processes to be gone through before the game commences. There is first what is technically termed “making.” This is simply another term for “shuffling.” The cards are laid face downwards, and then by a circular motion of the hands they are effectually mixed.

Next the “lead” has to be determined. (1) Each player draws a card, and the highest double claims the lead; if no double is drawn, the highest card determines the right of lead. The cards so drawn are then replaced face downwards, and the whole set re-made. (2) Another method is for one player to push two cards towards his opponent, who chooses one, and he takes the other. (3) A third method is to arrange the set in a line, which is divided at any point, the two cards at the point of division being selected, and a choice of these made by the player who cuts the line.

The lead being decided and the rest having been re-made, each player selects his “hand”—that is a certain specified number of cards—which are taken at random. The cards which remain when the selection is made are termed the “stock”—which is disposed of in various ways according to the particular game which is being played.

The leader next proceeds to “pose,” which he accomplishes by playing any card of his hand, laying it on the table face upwards. The second player then “poses” by *matching* the card laid down by the first player, but always in harmony with the rules of the game which is being played. The card which the second player plays must have its side matching the card played by the first, placed adjacent to its fellow

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blank, or fellow number, on the first card. The next to play must place a card one of whose numbers must be the same as one of the numbers at either end of the dominoes which have been already played. If thought convenient, and in order to avoid the moving which a long continuous row of dominoes would necessitate, the cards may be placed so as to turn the line in any direction desired.

Whenever a player cannot match the card at either end he must either "pass" or "draw." If the former, he says, "Go!" to his opponent, who must play, pass, or draw. To draw is to take a card from stock; the last two cards of stock cannot be drawn—it is then either play or pass. This process is continued as long as both players have a card in hand, or until neither can match or draw.

I.—The Block Game.

Seven pieces are drawn by each player. The one who has the highest double leads first, and afterwards, the players lead in rotation. The next player matches one or other end of the piece laid down; or if several be laid down then the pips on one or other of the uncovered ends. If he cannot do this, he says so, and the other plays. When a player has played all his pieces before his opponent can get rid of his, he cries, "Domino," and adds to his account the number of spots on the pieces in his opponent's hand. If, at any time, neither can play, the game is said to be "blocked," the pieces left are exposed, face upward, and the player having the smallest number of spots on the pieces he has left, adds the number of those in his opponent's hand to his count. The score, unless otherwise agreed on, is one hundred; but the usual score among players is now set at fifty.

RULES OF THE GAME.

1. Where it is in doubt whose turn it is to lead, the players draw, and the highest double leads.
2. When a misplay has been made, and not discovered before three subsequent pieces have been played, it cannot be corrected.
3. A party having four of a suit, should lead off with the odd piece, not of the prevailing suit.

II.—The Draw Game.

The only difference between the draw and the block game is, that in the former, when a party cannot play he draws from those on the table until he can find a piece to match. He may continue to draw after he has obtained the one wanted, but this is not considered courteous, though within the strict rule; and it is better to make a strict rule not to do it before beginning to play.

RULES OF THE GAME.

1. A party who draws when he can match, if he be discovered, forfeits the count.
2. A party, not having a piece to match an exposed end, can draw all the pieces on the table, unless otherwise agreed on.

III.—Muggins, or All-Fives Game.

Five pieces are drawn by each player, the highest double leads first, and after the first hand the lead goes around in rotation to the left-hand player. If both parties forget who played last, it may be determined by drawing, the highest piece drawn winning the lead. After the first hand has been played, the lead can be made with any piece chosen. If six-four or double-five be led it counts ten; if four-ace, trey-deuce, or five-blank, it counts five. In setting, the player who can set a piece that will make the two ends count five, or any multiple thereof, adds that number to his score. Thus: five-deuce being led, and five-trey being set to it, the trey at one end is added to the two at the other, and counts five to the one who led the five-trey.

If six-trey or double-trey be now played it counts nothing, because the sum of the two ends is only eight, which is not a multiple of five; but if four-deuce or double-deuce be now played, the one who plays it will count ten, for that is the sum of the ends.

We will suppose the game now goes on, and the six-trey is next added. The next player sets the double-six. Then, if the player next in turn sets four-trey, it will count him fifteen, or if double-four, twenty. If one cannot play in his turn he draws until he can; but, unlike the draw game, he must play when he has drawn one that will match. He who plays out first cries "Muggins," and, as in the block game, adds the spots in his opponent's hand to his score; and the same rule prevails in the case of a block, as in the other game. But in

counting up it is always by a multiple of five. Thus, if the loser has six, ten, or twelve in hand, the winner only counts five of them, whereas if he has eight or thirteen, the winner would have counted ten or fifteen, and so on for any number. If there be a deuce-blank, or ace-blank, or double-blank, or double-ace left, it counts nothing, while a trey-ace, double-deuce, or deuce-ace counts five. The score is two hundred when two play, or one hundred and fifty if three or more are in the game.

RULES OF THE GAME.

1. When a party in lead has five-blank and four-ace, or trey-deuce, never lead the five-blank, as it gives an opportunity for your opponent, in case he has the double-five to make ten to your five. *Exception:* When you have also the double-blank, for in that case you follow his ten by making another.

2. Never lead a double-six after the first lead, unless you hold the six-trey in your own hand.

3. You cannot draw on after you have obtained a piece that will match.

4. Always make a block, if possible, when your pieces in hand have few spots, and there are as many pieces as yours on the table, which your opponent must draw. This you can determine, however, by examining the pieces on the table, which, with an inspection of those in your hand, will tell you the number of points on the rest.

5. If anything be made by a set, it is lost if not claimed before the next player has matched.

IV.—The Bingo Game.

This is the king of Domino games, requiring a deal of skill and a good memory to play well. There are seven pieces taken by each player, only two playing. The points of the game are seven. The score in each hand is seventy, and the first player arriving at that, and claiming it, scores a point. Before commencing the lead is drawn for, and got by the lowest piece. After each has taken his seven pieces, the one who does not lead turns one of the remaining pieces, and the highest figure on that is trump, the blank counting as seven, and being, of course, higher than the six. As soon as a trick has been taken the winner draws a piece from those left, and then the loser one. This continues until all have been drawn, the turned-up trump domino being taken by the one who has the last draw.

The elder hand plays. It is not necessary to follow suit, even where a trump is led, unless all the dominoes have been taken from the table. But when all the dominoes have been drawn and are in the players' hands, a lead made must be followed, and if the opposite party cannot follow suit he must trump, if he has any in hand; and he is not allowed to throw away a poor domino not of suit. And, at any stage of the game after a player has taken one trick, if he thinks he can make seventy, he may turn down the trump domino. There is no more drawing after that, each party depending on the hand he holds, and suit must be followed or trumps played, precisely as though there were no dominoes left on the table.

Should a player turn down and not make seventy, his adversary scores two points; and if his opponent has made no trick before he turned down and he loses, the opponent scores three. Should he make his seventy after he turns down, or without turning down, he counts one; if before his opponent has made twenty, he counts two; if before his opponent has made two, he counts three.

A player having two doubles in his hand, when it is his turn to play, may lead one of them and call "Double," and this adds twenty to his score; if he have three doubles, "Triplet," and this adds forty; if four, "Double Doublet," and this adds fifty; if five, "King," and this adds sixty; if six "Emperor," and this adds seventy, and so wins the point; if seven doubles, it is an "Invincible," and takes three points. But if a double be taken, or be played without announcing it as one of a doublet, or whatever it may be, its value is lost.

In counting, you reckon the doublets and triplets; the double of trumps, which always counts twenty-eight; the double dominoes and the trump dominoes by the number of their spots, the blanks being considered to have seven spots; the six-blank, double-five, and trey-blank always counting as ten, whether trumps or not; and the doublet, or triplet, of which Bingo is one, counting ten more than its natural value, if announced as Bingo when the doublet or triplet is claimed.

The Bingo is double-blank and is always highest, and takes any other piece, no matter what is trump. Its natural value in counting is fourteen, unless it is trump, when, like all double trumps, it counts as twenty-eight.

If the double of trumps be taken by Bingo, it scores a point for the party who takes it.

After the first hand has been played, the winner leads in the next hand.

RULES OF THE GAME.

1. Avoid playing a piece which leaves in your hand but one ten, lest you have to lose it to an eleven.

2. The blank-four and six-five are elevens when blank, six, five, or four are trumps, though they count nothing, and take the six-four, double-five, and trey-blank respectively. The six-five, when either six or five is trumps, takes the six-

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four, when it can be played on it, and the blank-four, when blank is trump, takes either of the others.

3. When certain of sixty, turn down the trump as quickly as possible.
4. Keep your opponent's score in your mind as well as your own.
5. Keep a single double in your hand as long as possible, so that if you draw another from the pack you may call a doublet.
6. You cannot call your doubles until it is your turn to play.
7. You cannot turn down until you have a trick in hand.

V.—The Matador Game.

Each player has seven cards, and after the leading card has been played, the next card played must with one end of it make up the end of the first card (to which it is laid down) to the number seven. Thus: four must be played to three, one to six, two to five, and *vice versa*. Doubles, of course, count the pips on one end only, for this purpose; in scoring, they are all counted.

There are, however, four cards which are an exception to this rule, as they may be played to any card, at either end, and whether they do or do not match: moreover, no other cards can be played to a blank. These cards are, double-blank, six-one, five-two, and four-three. They are called *matadors*.

RULES OF THE GAME.

1. Each player draws four dominoes.
2. The last two cannot be drawn.
3. Every player must play such a domino as to make the adjacent halves amount to seven, except in the case of a blank, when a Matador must be played.
4. The Matadors are the double-blank, 6-1, 5-2, and 3-4, and these may be played at any time in the game, and *either way before*.
5. When either has not the necessary domino to play, and it is his turn, he ~~must~~ draw until he gets it, or until there are only two dominoes undrawn. If, after he has drawn all he can, he is still unable to play, his adversary must play instead, wherever he can. When neither can play, the pips are counted, and whoever has the smallest number scores all his adversary's. When the numbers are equal neither party scores.
6. When either is able to play out his last domino, the deal is at an end, and he scores the number of his adversary's pips, notwithstanding that there may be more dominoes remaining undrawn.
7. Either party whose turn it is to play may draw as many dominoes as he wishes, even after obtaining the card he requires, being guided as to the number by what he has in his hand.
8. The game is usually one hundred, and three games make a rubber. If one player scores a hundred without his opponent making a single point, it is called a *Zapatero*, and counts as a rubber.

WHIST AS A MEANS OF SELF-CULTURE.

BY

C. D. P. HAMILTON, AUTHOR OF "MODERN SCIENTIFIC WHIST."

WHIST is the finest of all card games. There is no sedentary game so mentally invigorating, which tends so well to educate, divert, and amuse. My advice to parents is to encourage their children to play at whist and become proficient at the game. It will be sure to lead them away from games and forms of amusement that are objectionable. The path to whist will lead away from the vulgar and the vicious. The path to whist is away from the saloon, from the dance hall, and other public resorts. Whist is not a game for the saloon or gambling den, and, in America, at least, is never played for stakes. The infinite variety and resources of the game are sufficient incentive to play.

Morally and socially whist is far above all other games at cards, and it is preëminently the game of the home and the fireside. Whist

leads to the residence section. It leads to lawns, and trees, and flowers. It leads to art, and music, and poetry. It leads to taste, and culture, and refinement. It leads to homes, and firesides, and the family. Once a devotee of whist, no other game at cards is attractive. Fathers and mothers, if you know your son is out for the evening playing at whist, you know that he is at the home of thoughtful and intellectual people, that he is by the fireside of a family of culture and refinement, that he is in a social and moral atmosphere that is broadening and ennobling.

Whist is the game for son or daughter at home, with father and mother. It is a mental training and recreative amusement at home under the parents' care and guidance. Whist will keep your boy at home, or invite him and make him welcome at the home of a friend or neighbor where you would wish him to be. The study of whist adds wonderfully to the mother's influence and power over the training and mind culture of the child. It enables the mother to develop in the child mental qualities and social refinement and ethics that will equip the child to battle successfully with the more important things.

Whist transcends all other games as an educator. Its greatest merit is that it makes the student's amusement take a part in instructing his mind. It offers pleasure while it instructs. It is like seeing a comedy by Shakespeare or an opera by Wagner. Whist teaches the student the fallacy of jumping at conclusions. It makes him realize that he cannot cut corners or go across lots. He must tramp the long and hard way of careful thought, and study, and correct reasoning. It qualifies him for the great battle of life. It equips him for a leader, not a follower. The student at whist soon learns that to play well he must be constantly alert and vigilantly attentive; at times aggressive and again on the defence; at times cautious; at times daring. He realizes the value of accuracy and the ability to foresee results. He acquires a knowledge of character. He is constantly sharpening the mental qualities that are so essential as a means of success. The desire to become skilful at whist is a constant incentive to the child to exercise his reasoning faculties to the utmost. It strengthens his memory and broadens his mind. He critically observes things. He gets into the habit of correct thinking. He reasons, he analyzes, he calculates, he makes deductions. Whist teaches the student to weigh and philosophically examine the chances for or against the success of his plans. He looks into the philosophy of the probabilities of the game and takes into consideration its mathematical features. He acquires confidence in himself and learns to have respect for his judgment and ability.

This page might be filled with the mere mention of the names of men who are skilful at whist and distinguished as statesmen and savants, jurists and journalists, ministers of church and state; filled with the names of men famous in the arts and sciences, in law, in diplomacy, in mathematics, in astronomy, in chemistry, in geology,

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in poetry and fiction. These illustrious men did not find whist attractive as a careless pastime. They found in its study and practice intellectual amusement and nourishment. They enjoyed a mental exercise that was not only beneficial but refreshing; a profitable pleasure in their youth, a solace in their old age.

Many of the world's most famous men and women have enriched the literature of the game. Talleyrand, the French statesman, upon Napoleon's abdication, selected the members of his provisional government, with one exception, from his whist associates. He said: "You do not know whist, young man? What a sad old age you are preparing for yourself."

Edgar Allan Poe, the marvelous composer of word harmonies, said: "Proficiency in whist implies capacity for success in all those more important undertakings where mind struggles with mind."

Ouida, the novelist, said: "A man who has trained his intellect to perfection in whist has trained it to be capable of achieving anything the world can offer. A campaign does not need more combination; a cabinet does not need more address; an astronomer-royal does not solve finer problems; a continental diplomatist does not prove greater tact."

Whist is of English origin. It is claimed that the earliest mention of whist is by Taylor, the Water Poet (1621), but he spells the word "whisk." The present spelling is first met with in "Hudibras," 1663. It is probable that the game of whist came into vogue about the middle of the 17th century. Whist was first played on scientific principles about 1728. In 1743 Edmund Hoyle published his "Short Treatise," and has been called the father of whist.



THIS LIFE IS LIKE A GAME OF CARDS.

This life is like a game of cards,
That each man tries to learn;
Each shuffles, cuts, and deals the pack,
And each a trump must turn.

Some turn a high card on the top,
While others turn a low;
Some hold a hand that's flush with trumps,
While others none can show.

Some shuffle with a practised hand
 And pack their cards with care,
 So they may know when cards are dealt
 Where all the leaders are.

When hearts are trumps we play for love,
 And pleasure decks the hour,
 No thought of sorrow casts its shade
 O'er pleasure's rosy bower.

We dance, we sing, sweet music play,
 Our cards at random throw,
 And so our game's a holiday
 While we have trumps to show.

When diamonds chance to crown the pack
 It's then men stake their gold;
 Large sums are often lost and won
 By gamblers, young and old.

Intent on winning each doth watch
 His neighbor with eager eye;
 In hopes perchance to get the chance
 To cheat him on the sly.

When clubs are trumps look out for war,
 On ocean or on land;
 For horrid deeds are often done
 When clubs are in our hand.

The last game of all is when the spade
 Is turned by hand of time;
 It's Time that finishes up the game
 In every land and clime.

No matter how much a man may make,
 Or how much a man may save;
 You'll find the spade turns up at last
 And digs the gambler's grave.

THE LAWS OF THE GAME.

1. The game shall consist of seven points. Each trick above six counts as one point. A rubber is the decisive game of three.

2. The first dealer is he who of the four players has cut or drawn the lowest card. The player on the left shuffles the pack chosen by the dealer, and the player on his right cuts, not leaving less than four cards in each pack. The cut, when both packs are on the table, is the pack nearest the centre of the table. The trump card, which is the under card of the cut, must not be known until it is turned by the dealer. If, by accident, it should be seen, or if any other card is exposed when cutting, the pack must be cut again. While the deal is being made, the dealer's partner shuffles the other pack for his own right-hand opponent, who is next to deal.

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8. Either pack may be shuffled by any one of three players while the other pack is being dealt; but as a rule, the cards having been shuffled at the beginning by any of the players will not again be shuffled, except as by Law 2.

4. The deal is lost if thirteen cards are not in regular succession, beginning at the dealer's left, received by each player, and if the last card is not turned up at the dealer's right hand, if a card is faced in the pack, or if a card is exposed while dealing.

5. The trump card shall remain upon the table until three players shall have played, or longer, at the dealer's option.

6. No player will touch his cards until the trump card is turned.

7. If a player throws two or more cards at once, or exposes a card unless to play it, or fails to play upon a trick, or plays out of turn, he suffers the penalty of law 14.

8. Every hand must be played out, unless the game being decided to the satisfaction of the losers, one or both of them throw down their cards. If the cards are so thrown down the game is at once counted against them, and if points are being kept, a point is taken by the winners for each card in any one hand.

9. No cards can be called and no conversation can take place during the play. *Whist is the game of silence.*

10. If a player revoke, his partner must with him share the fault and penalty, which is three points taken from their score, or three added to their adversaries' score, at such adversaries' will, the revoke to be decided by the examination of the cards, if need be, at the close of the hand. Each party has a right to make such examinations for any purpose.

11. If a player, having thrown a card that would cause a revoke, can substitute the proper card for that thrown before the trick is turned, he may do so, and suffer the penalty of Law 14, for having at first thrown a wrong card. If, in the meantime, other cards have been played, any or all of them can be recalled.

12. A player whose next turn it is to play may point to any card upon the table, and the player of such card will draw it toward him to designate that he played it in his turn.

13. When the trick is taken and turned it cannot again be seen until the hand is played.

14. The penalty for infringement of any Law is the deduction of one point from the score of the offender, or the addition of one point to the score of the claimant, as the adversaries upon consultation at the close of the hand shall elect.

Explanation of Technical Terms.

Bring In.—To make the cards composing a suit after trumps are out.

Call.—See "Signal."

Command.—The winning cards over all that are in play.

Conventional.—A term applied to an established usage, as the "conventional" discard of the second best.

Coup.—A French word anglicised, which means a stroke that gains advantage in brilliant play.

Discard.—The card of another suit than that led, thrown away.

Echo.—The play purposely of a card that does not take, followed by the play of a lower card, partner having called.

Eleventh.—The master card of three in play, ten having been played.

Establish.—So to play that you gain command of a suit.

False Card.—One played contrary to conventional rule.

Finesse.—The play of a card lower than one that you hold not in sequence with it, or the passing a card played by your partner when you hold a higher card. A finesse can also be made upon the card already thrown by the opponent. Deschappelles has six qualifications:

1. The finesse proper.
2. The returned finesse.
3. The finesse by trial.
4. The freed finesse.
5. The finesse by speculation.
6. The finesse on the partner.

Clay says the varieties of the finesse are infinite, but treats especially of the Finesse Speculative, which means the play of a third card holding first, but not second best, and the Finesse Obligatory, which is the playing of a card not your best that threatens to bring down one much higher from the opponent, you taking the risk of his holding a lower card, high enough, however, to take the card you play.

Force.—A winning card played to exact a trump from the adversary, or a losing card to be trumped by your partner.

Game.—Seven points made by tricks.

Grand Coup.—The throwing away of a superfluous trump, or the taking by trumping of the partner's trick, that the lead may be thrown back to him, or the under-trumping a trick, whether trumped by your partner or opponent, for the purpose of throwing the lead.

Guarded.—A high card is guarded when smaller cards of the same suit are with it to be played upon higher cards than itself.

Hand.—The thirteen cards received from the dealer.

High Cards.—The nine to the ace inclusive.

Lead.—The first card played in any round.

Leading Through.—Playing a card of a suit in which the left-hand adversary is strong.

Leading up to.—Playing a card of a suit in which a high card is held by the right-hand adversary.

Long Cards.—Those remaining in a hand when all the rest of a suit have been played.

Long Suits. See "*Suit*."

Long Trump.—The thirteenth, twelve having been played.

Low Cards.—The eight to the deuce inclusive.

Make.—To take a trick is to make it.

Master Card.—The highest card not played.

Opening.—The first lead in each hand of each player.

Pass.—You are said to pass when, you third hand, holding a higher one, throw a smaller card of the suit than some one that has been played. It is, too, another word for finesse upon your partner.

Plain Suits. See "*Suit*."

Points.—The number of tricks over six. Points are sometimes kept as well as games and rubbers. In such case all that are made by each side are counted.

Re-entry.—A card of re-entry is one that, winning a trick not led by its holder, enables him to bring in a suit or throw a lead to advantage.

Renouncing.—Playing a card of another suit upon a suit led.

Revoke.—The play of a card of another suit while holding one of the suit led.

Round.—Every four cards played in succession after the turning of the trump card.

Rubber.—The second consecutive game won by two players, or the third game won by the same players who won the first, the second having been won by their opponents.

Saw.—The play from partners to each other of suits that are trumped third hand.

Score.—The registry of points made upon the game.

Second Hand.—The elder hand, he who plays immediately after the leader.

Sequence.—Three cards or more that follow in regular order, *ace, k., and q.*, is a tierce (sequence) to the *ace*, and when the *k. and q.* have been played, *ace, k., and ten* form a sequence. Tierce is a sequence of three cards; quart, of four; quint, of five; sixieme of six; and septieme, of seven. A head sequence is the consecutive three or more of the largest cards of the suit in your hand; an intermediate sequence is neither at the head nor foot of the suit, and a subordinate sequence is one of smaller cards than those that compose the head sequence.

Shuffle.—Change of the relative position of the cards.

Signal.—The call; the echo; a request or reply made by the play. The play of the *ace* or of the highest card in play of any plain suit upon a lead of any other suit signals no more of that suit, or the entire command of it. The play of the second-best card of a suit in play, as a discard, signals no more of that suit. The play of a card not as low as could have been properly played, followed by the play of one lower, is a signal or call for trumps. An indication given by the cards that a certain number of trumps are held, or that certain cards help to form a suit, etc. Whist is conversational—that is, the cards speak, not the players, and so the game is full of signals.

Singleton.—The one card only of a suit.

Spread.—Distribution of the pack, backs uppermost, that cards from any part of it may be drawn.

Strengthening Play.—Getting rid of high cards to give value to lower ones, and so make strong the partner's hand.

Suit.—A series of cards whose modern names are spades, hearts, clubs, and diamonds. A trump suit is composed of the cards in each hand, that are of the series, one of which is turned by the dealer. The other three are plain suits. A long suit is one of four cards or more; a short suit, one of three cards or less; a strong suit is one of high cards; a weak suit, one of low cards, or a short suit of high cards.

Tenace.—The best and third best cards in play of a suit is a major tenace; the second and fourth best, a minor tenace.

Third Hand.—The partner of the leader.

Thirteenth.—The card of any suit in hand after twelve of that suit have been played.

Throwing the Lead.—Playing a card that imposes an obligation on the part of another player to take the trick.

Trick.—The four cards played in a round, taken and turned.

Trump.—One of the suit of the trump card.

Trump Card.—That turned at the right hand of the dealer.

Twelfth.—One of the two cards in play of a suit, eleven having been played.

Underplay.—Playing a low card, retaining a high one of the same suit.

Winning Card.—The highest in play of the suit.

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II.—*English Whist.*

English Whist is divided into "Long Whist" and "Short Whist."

In the former ten points make the game, and a rubber is two games out of the three. Each trick over six counts one point. Four honors with partners count four points, and three honors with partners count two points. Adversaries are said to be divided who hold two each and nothing is reckoned for them. When the score is at nine honors do not count.

In "Short Whist" the game is five points and the rubber is made as in "Long Whist." Four cards, one from each player, when gathered, become a trick. Every trick which one side makes in excess of their opponents counts as one point toward the game. The side scoring five to their adversaries' one makes a *treble game*. The side scoring five to their adversaries' one or two, makes a *double game*. The winning side scores a *single game* only if their opponents have scored more than two. Honors count as in "Long Whist," but do not count when the score is at four. The ace, king, queen, and knave of trumps are called honors.

Dummy Whist may be played by either three persons (one of the three being partner to the dummy hand laid open on the table), or by two persons each of whom is partner to a dummy hand laid open on the table.

THE LAWS OF WHIST.

The Rubber.

1. The rubber is the best of three games. If the first two games be won by the same players, the third game is not played.

Scoring.

2. A game consists of five points. Each trick, above six, counts one point.

3. Honors, *i. e.*, Ace, King, Queen, and Knave of trumps, are thus reckoned: If a player and his partner, either separately or conjointly hold:

I. The four honors, they score four points.

II. Any three honors, they score two points.

III. Only two honors, they do not score.

4. Those players, who, at the commencement of a deal, are at the score of four cannot score honors.

5. The penalty for a revoke takes precedence of all other scores; tricks score next; honors last.

6. Honors, unless claimed before the trump card of the following deal is turned up, cannot be scored.

7. To score honors is not sufficient; they must be called at the end of the hand; if so called, they may be scored at any time during the game.

8. The winners gain—

I. A treble, or game of three points, when their adversaries have not scored.

II. A double, or game of two points, when their adversaries have scored less than three.

III. A single, or game of one point, when their adversaries have scored three or four.

9. The winners of the rubber gain two points (commonly called the rubber points), in addition to the value of their games.

10. Should the rubber have consisted of three games, the value of the loser's game is deducted from the gross number of points gained by their opponents.

11. If an erroneous score be proved, such mistake can be corrected prior to the conclusion of the game in which it occurred, and such game is not concluded until the trump card of the following deal has been turned up.

12. If an erroneous score, affecting the amount of the rubber, be proved, such mistake can be rectified at any time during the rubber.

Outting.

13. The ace is the lowest card.

14. In all cases, every one must cut from the same pack.

15. Should a player expose more than one card, he must cut again.

Formation of Table.

16. If there are more than four candidates, the players are selected by cutting; those first in the room having the preference. The four who cut the lowest cards play first, and again cut to decide on partners; the two lowest play against the two highest; the lowest is the dealer, who has choice of cards and seats, and having once made his selection must abide by it.

17. When there are more than six candidates, those who cut the two next lowest cards belong to the table, which is complete with six players; on the retirement of one of those six players, the candidate who cut the next lowest card has a prior right to any after-comer to enter the table.

Outting Cards of Equal Value.

18. Two players cutting cards of equal value, unless such cards are the highest, cut again; should they be the two lowest, a fresh cut is necessary to decide which of those two deals.

19. Three players cutting cards of equal value cut again; should the fourth

(or remaining) card be the highest, the two lowest of the new cut are partners, the lowest of those two the dealer; should the fourth card be the lowest, the two highest are partners, the original lowest the dealer.

Cutting Out.

20. At the end of a rubber, should admission be claimed by any one, or by two candidates, he who has, or they who have, played a greater number of consecutive rubbers than the others is, or are, out; but when all have played the same number, they must cast to decide upon the out-goers; the highest are out.

Entry and Re-entry.

21. A candidate wishing to enter a table must declare such intention prior to any of the players having cut a card, either for the purpose of commencing a fresh rubber, or of cutting out.

22. In the formation of fresh tables, those candidates who have neither belonged to nor played at any other table have the prior right of entry, the others decide their right of admission by cutting.

23. Any one quitting a table prior to the conclusion of a rubber, may, with consent of the other three players, appoint a substitute in his absence during that rubber.

24. A player cutting into one table, whilst belonging to another, loses his right of re-entry into that latter, and takes his chance of cutting in, as if he were a fresh candidate.

25. If any one break up a table, the remaining players have the prior right to him of entry into other, and should there not be sufficient vacancies at such other table to admit all those candidates, they settle their precedence by cutting.

Shuffling.

26. The pack must neither be shuffled below the table nor so that the face of any card be seen.

27. The pack must not be shuffled during the play of the hand.

28. A pack, having been played with, must neither be shuffled by dealing into packets, nor across the table.

29. Each player has a right to shuffle, once only, except as provided by Rule 32, prior to a deal, after a false cut, or when a new deal has occurred.

30. The dealer's partner must collect the cards for the ensuing deal, and has the first right to shuffle that pack.

31. Each player, after shuffling, must place the cards, properly collected and face downwards, to the left of the player about to deal.

32. The dealer has always the right to shuffle last; but should a card or cards be seen during his shuffling or whilst giving the pack to be cut, he may be compelled to re-shuffle.

The Deal.

33. Each player deals in his turn; the right of dealing goes to the left.

34. The player on the dealer's right cuts the pack, and in dividing it, must not leave fewer than four cards in either packet; if in cutting, or in replacing one of the two packets on the other, a card be exposed, or if there be any confusion of the cards, or a doubt as to the exact place in which the pack was divided, there must be a fresh cut.

35. When a player, whose duty it is to cut, has once separated the pack, he cannot alter his intention; he can neither re-shuffle nor re-cut the cards.

36. When the pack is cut, should the dealer shuffle the cards he loses his deal.

A New Deal.

37. There must be a new deal—

I. If, during a deal, or during the play of a hand, the pack be proved incorrect or imperfect.

II. If any card excepting the last, be faced in the pack.

38. If, whilst dealing, a card be exposed by the dealer or his partner, should neither of the adversaries have touched the cards, the latter can claim a new deal; a card exposed by either adversary gives that claim to the dealer, provided that his partner has not touched a card; if a new deal does not take place, the exposed card cannot be called.

39. If, during dealing, a player touch any of his cards, the adversaries may do the same without losing their privilege of claiming a new deal, should chance give them such option.

40. If, in dealing, one of the last cards be exposed, and the dealer turn up the trump before there is reasonable time for his adversaries to decide as to a fresh deal, they do not thereby lose their privilege.

41. If a player, whilst dealing, look at the trump card, his adversaries have a right to see it, and may exact a new deal.

42. If a player take into the hand dealt to him a card belonging to the other pack, the adversaries on discovery of the error may decide whether they will have a fresh deal or not.

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A Misdeal.

43. A misdeal loses the deal.

44. It is a misdeal—

- I. Unless the cards are dealt into four packets, one at a time in regular rotation, beginning with the player to the dealer's left.
- II. Should the dealer place the last (*i. e.*, the trump) card, face downwards, on his own, or on any other pack.
- III. Should the trump card not come in its regular order to the dealer; but he does not lose his deal if the pack be proved imperfect.
- IV. Should a player have fourteen cards, and either of the other three less than thirteen.
- V. Should the leader, under an impression that he has made a mistake, either count the cards on the table, or the remainder of the pack.
- VI. Should the dealer deal two cards at once, or two cards to the same hand, and then deal a third; but if, prior to dealing that third card, the dealer can by altering the position of one card only, rectify such error, he may do so, except as provided by the second paragraph of this Law.
- VII. Should a dealer omit to have the pack cut to him, and the adversaries discover the error, prior to the trump card being turned up, and before looking at their cards, but not after having done so.

45. A misdeal does not lose the deal if, during the dealing either of the adversaries touch the cards prior to the dealer's partner having done so, but should the latter have first interfered with the cards, notwithstanding either or both of the adversaries have subsequently done the same, the deal is lost.

46. Should three players have their right number of cards—the fourth have less than thirteen, and not discover such deficiency until he has played any of his cards, the deal stands over; should he have played, he is as answerable for any revoke he may have made as if the missing card or cards have been in his hand; he may search the other pack for it, or them.

47. If a pack, during or after a rubber, be proved incorrect or imperfect, such proof does not alter any past score, game, or rubber; that hand in which the imperfection was detected is null and void; the dealer deals again.

48. Any one dealing out of turn, or with the adversary's cards, may be stopped before the trump card is turned up, after which the game must proceed as if no mistake has been made.

49. A player can neither shuffle, cut, nor deal for his partner, without the permission of his opponents.

50. If the adversaries interrupt a dealer whilst dealing, either by questioning the score, or asserting that it is not his deal, and fail to establish such claim, should a misdeal occur, he may deal again.

51. Should a player take his partner's deal, and misdeal, the latter is liable to the usual penalty, and the adversary next in rotation to the player who ought to have dealt then deals.

The Trump Card.

52. The dealer, when it is his turn to play to the first trick, should take the trump card into his hand; if left on the table after the first trick be turned and quitted, it is liable to be called; his partner may at any time remind him of the liability.

53. After the dealer has taken the trump card into his hand, it cannot be asked for; a player naming it at any time during the play of that hand is liable to have his highest trump called.

54. If the dealer take the trump card into his hand before it is his turn to play, he may be desired to lay it on the table; should he show a wrong card, this card may be called, as also a second, a third, etc., until the trump card be produced.

55. If the dealer declare himself unable to recollect the trump card, his highest or lowest trump may be called at any time during that hand, and, unless it cause him to revoke, must be played; the call may be repeated, but not changed, *i. e.*, from highest to lowest, or *vice versa*, until such card is played.

Cards Liable to be Called.

56. All exposed cards are liable to be called, and must be left on the table; but a card is not an exposed card when dropped on the floor, or elsewhere below the table. The following are exposed cards:

I. Two or more cards played at once.

II. Any card dropped with its face upwards, or in any way exposed on or above the table, even though snatched up so quickly that no one can name it.

57. If any one play to an imperfect trick the best card on the table, or lead to play several such winning cards, one after the other, without waiting for his partner to play, the latter may be called on to win, if he can, the first or any of those tricks, and the other cards thus improperly played are exposed cards.

58. If a player, or players, under the impression that the game is lost—or won—or for other reasons—throw his or their cards on the table face upwards, such cards are exposed and liable to be called, each player's by the adver-

sary; but should one player alone retain his hand, he cannot be forced to abandon it.

59. If all four players throw their cards on the table face upwards, the hands are abandoned; and no one can again take up his cards. Should this general exhibition show that the game might have been saved, or won, neither claim can be entertained, unless a revoke be established. The revoking players are then liable to the following penalties: they cannot under any circumstances win the game by the result of that hand, and the adversaries may add three to their score, or deduct three from that of the revoking players.

60. A card detached from the rest of the hand so as to be named is liable to be called; but should the adversary name a wrong card, he is liable to have a suit called when he or his partner have the lead.

61. If a player who has rendered himself liable to have the highest or lowest of a suit called, fail to play as desired, or if when called on to lead one suit, lead another, having in his hand one or more cards of that suit demanded, he incurs the penalty of a revoke.

62. If any player lead out of turn, his adversaries may either call the card erroneously led—or may call a suit from him or his partner when it is next the turn of either of them to lead.

63. If any player lead out of turn, and the other three have followed him, the trick is complete, and the error cannot be rectified; but if only the second, or the second and third, have played to the false lead, their cards, on discovery of the mistake, are taken back; there is no penalty against any one, excepting the original offender, whose card may be called—or he, or his partner, when either of them has the next lead, may be compelled to play any suit demanded by the adversaries.

64. In no case can a player be compelled to play a card which would oblige him to revoke.

65. The call of a card may be repeated until such card has been played.

66. If a player called on to lead a suit have none of it, the penalty is paid.

Cards Played in Error, or not to a Trick.

67. If the third play before the second, the fourth may play before his partner.

68. Should the third hand not have played, and the fourth play before his partner, the latter may be called on to win, or not to win the trick.

69. If any one omit playing to a former trick, and such error be not discovered until he has played to the next, the adversaries may claim a new deal; should they decide that the deal stand good, the surplus card at the end of the hand is considered to have been played to the imperfect trick, but does not constitute a revoke therein.

70. If any one play two cards in the same trick, or mix his trumps, or other cards, with a trick to which it does not properly belong, and the mistake be not discovered until the hand be played out, he is answerable for all consequent revokes he may have made. If, during the play of the hand, the error be detected, the tricks may be counted face downwards, in order to ascertain whether there be among them a card too many; should this be the case they may be searched, and the card restored; the player is, however, liable for all revokes which he may have meanwhile made.

The Revoke.

71. The Revoke is when a player, holding one or more cards of the suit led, plays a card of a different suit.

72. The penalty for a revoke:

- I. Is at the option of the adversaries, who, at the end of the hand, may either take three tricks from the revoking player—or deduct three points from his score—or add three to their own score.
- II. Can be claimed for as many revokes as occur during the hand;
- III. Is applicable only to the score of the game in which it occurs;
- IV. Cannot be divided, *i. e.*, a player cannot add one or two to his own score and deduct one or two from the revoking player;
- V. Takes precedence of every other score, *e. g.*—The claimants two—their opponents nothing—the former add three to their score, and thereby win a treble game, even should the latter have made thirteen tricks, and held four honors.

73. A revoke is established, if the trick in which it occurs be turned and quitted, *i. e.*, the hand removed from that trick after it has been turned face downwards on the table—or if either the revoking player or his partner, whether in his right turn or otherwise, lead or play to the following trick.

74. A player may ask his partner whether he has a card of the suit which he has renounced; should the question be asked before the trick is turned and quitted, subsequent turning and quitting does not establish the revoke, and the error may be corrected, unless the question be answered in the negative, or unless the revoking player or his partner have led or played to the following trick.

75. At the end of the hand, the claimants of a revoke may search all the tricks.

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76. If a player discover his mistake in time to save a revoke, the adversaries, whenever they think fit, may call the card thus played in error, or may require him to play his highest or lowest card to that trick to which he has renounced;—any player or players who have played after him may withdraw their cards and substitute others: the cards withdrawn are not liable to be called.

77. If a revoke be claimed, and the accused player or his partner mix the cards before they have been sufficiently examined by the adversaries, the revoke is established. The mixing of the cards only renders the proof of a revoke difficult, but does not prevent the claim, and possible establishment, of the penalty.

78. A revoke cannot be claimed after the cards have been cut for the following deal.

79. The revoking player and his partner may, under all circumstances, require the hand in which the revoke has been detected to be played out.

80. If a revoke occur, be claimed, and proved, bets on the odd trick, or on amount of score, must be decided by the actual state of the latter, after the penalty is paid.

81. Should the players on both sides subject themselves to the penalty for one or more revokes, neither can win the game: each is punished at the discretion of his adversary.

82. In whatever way the penalty be enforced, under no circumstances can a player win the game by the result of the hand during which he has revoked; he cannot score more than four. (*Vide* Rule 81.)

Calling for New Cards.

83. Any player (on paying for them) before, but not after, the pack be cut for the deal, may call for fresh cards. He must call for two new packs, of which the dealer takes his choice.

General Rules.

84. Where a player and his partner have an option of exacting from their adversaries one of two penalties, they should agree who is to make the election, but must not consult with one another which of the two penalties it is advisable to exact; if they do so consult they lose their right, and if either of them, with or without consent of his partner, demand a penalty to which he is entitled, such decision is final. [This rule does not apply in exacting penalties for a revoke; partners have then a right to consult.]

85. Any one during the play of a trick, or after the four cards are played, and before, but not after they are touched for the purpose of gathering them together, may demand that the cards be placed before their respective players.

86. If any one, prior to his partner playing, should call attention to the trick—either by saying that it is his, or by naming his card, or, without being required so to do, by drawing it towards him—the adversaries may require that opponent's partner to play the highest or lowest of the suit then led, or to win or lose the trick.

87. In all cases where a penalty has been incurred, the offender is bound to give reasonable time for the decision of his adversaries.

88. If a bystander make any remark which calls the attention of a player or players to an oversight affecting the score, he is liable to be called on, by the players only, to pay the stakes and all bets on that game or rubber.

89. A bystander by agreement among the players may decide any question.

90. A card or cards torn or marked must be either replaced by agreement, or new cards called at the expense of the table.

91. Any player may demand to see the last trick turned, and no more. Under no circumstances can more than eight cards be seen during the play of the hand, viz., the four cards on the table which have not been turned and quitted, and the last trick turned.

ETIQUETTE OF ENGLISH WHIST.

[*The only remedy against the infraction of the established Etiquette is Boy-cotting.*]

Two packs of cards are invariably used at Clubs and this custom should be always observed if possible.

Any one having the lead and several winning cards to play should not draw a second card out of his hand until his partner has played to the first trick, such act being a distinct intimation that the former has played a winning card.

No intimation whatever by word or gesture, should be given by a player as to the state of his hand, or of the game.

A player who desires the cards to be placed, or who demands to see the last trick, should do it for his own information only, and not to invite the attention of his partner.

No player should object to refer to a bystander who professes himself uninterested in the game, and able to decide any disputed question of fact; as to who played any particular card—whether honors were claimed though not scored, or *vice versa*—etc.

It is unfair to revoke purposely; having made a revoke, a player is not justified in making a second in order to conceal the first.

Bystanders should make no remark; neither should they by word or gesture give any intimation of the state of the game until concluded and scored, nor should they walk round the table to look at the different hands.

BOB SHORT'S RULES.

For First Hand, or Lead.

1. Lead from your strong suit, and be cautious how you change suits, and keep a commanding card to bring it in again.
2. Lead through the strong suit and up to the weak, but not in trumps, unless very strong in them.
3. Lead the highest of a sequence; but if you have a quart or quint to a king, lead the lowest.
4. Lead through an honor, particularly if the game be much against you.
5. Lead your best trump if the adversaries be eight, and you have no honor, but not if you have four trumps, unless you have a sequence.
6. Lead a trump if you have four or five of a strong hand, but not if weak.
7. Having ace, king, and two or three small cards, lead ace and king if weak in trumps, but a small one if strong in them.
8. If you have the last trump, with some winning cards, and one losing card only, lead the losing card.
9. Return your partner's lead, not the adversaries', and if you have only three originally, play the best; but you need not return it immediately when you win with the king, queen, or knave, and have only small ones, or when you hold a good sequence, have a strong suit, or have five trumps.
10. Do not lead from ace queen or ace knave.
11. Do not lead an ace unless you have a king.
12. Do not lead a thirteenth card, unless trumps be out.
13. Do not trump a thirteenth card, unless you be last player or want the lead.
14. Keep a small card to return your partner's lead.
15. Be cautious in trumping a card when strong in trumps, particularly if you have a strong suit.
16. Having only a few small trumps, make them when you can.
17. If your partner refuses to trump a suit of which he knows you have not the best lead your best trump.
18. When you hold all the remaining trumps, play one, and then try and put the lead in your partner's hand.
19. Remember how many of each suit are out, and what is the best card left in each hand.
20. Never force your partner if you are weak in trumps, unless you have a renounce or want the odd trick.
21. When playing for the odd trick, be cautious of trumping out, especially if your partner is likely to trump a suit; make all the tricks you can early, and avoid finessing.
22. If you take a trick and have a sequence, win with the lowest.

For Second Hand.

23. With king, queen, and small cards, play a small one when strong in trumps; but if weak, play the king. With ace, king, queen, or knave only, and a small card, play the small one.

For Third Hand.

24. With ace and queen, play Her Majesty, and if she wins return the ace. In all other cases the third hand should play his best card when his partner has led a low one. It is a safe rule for third hand to play his highest.

For All the Players.

25. Fail not, when in your power, to make the odd trick.
26. Attend to the game, and play accordingly.
27. Hold the turn-up card as long as possible, and so keep your adversaries from a knowledge of your strength.
28. Retain a high trump as long as you can.
29. When in doubt, win the trick.
30. Play the game fairly, keep your temper, and don't talk.

HOYLE'S GRAMMAR OF WHIST.

How should sequences of trumps be played?—Begin with the highest.

When sequences are not in trumps, how should they be played?—If you hold five, begin with the lowest; if less than five, begin with the highest.

Why are sequences preferable to frequent changes of suits?—Because they form safe leads, and gain the tenace in other suits.

When should partners make tricks early?—When they are weak in trumps.

When may you allow your opponents to make tricks early in the round?—When you are strong in trumps.

When is it proper to play from an Ace-suit?—When you hold three Aces, neither of which is a trump.

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When any good card is turned up on your right, how should you play? If an Ace be turned up, and you hold King, and a small card, play the small one. If King be turned up, and you hold Ace and small ones, play a small one. If a Ten be turned up, and you hold King, Knave, Nine, and others, begin with the Knave, in order to prevent the Ten from making a trick, and finesse with the Nine.

How do you know when your partner has no more of the suit played?—By his playing his high card instead of a loose one. Thus, suppose you hold King, Queen, and Ten, and your partner answers with Knave, you may be certain that is the only card he possesses of the suit.

When ought you to over-trump your adversary, and when not?—If you are strong in trumps you may throw away a loose trump, but if weak over-trump at all risks.

If your right-hand adversary lead a suit in which you have Ace, King, and Queen, with which card are you to take the trick?—With the Queen, as then the same suit may be led again by your opponent, under the idea that his partner holds the high cards.

Why should you play from King-suit, rather than from Queen-suit, though you may possess a like number of each?—Because it is two to one that the Ace does not lie in your adversary's hands, and it is five to four that if you play from Queen you lose her.

When you possess the four best cards of any suit, why do you play your best?—To inform your partner as to the state of your hand.

The Queen turned up on your right, and you hold Ace, Ten and one trump, or King, Ten, and one trump, if right-handed opponent plays the Knave, what should you do?—Pass the trick. You cannot lose by so doing, as your Ace must make, and you may gain a trick.

When can you finesse in other suits with impunity?—When you are strong in trumps.

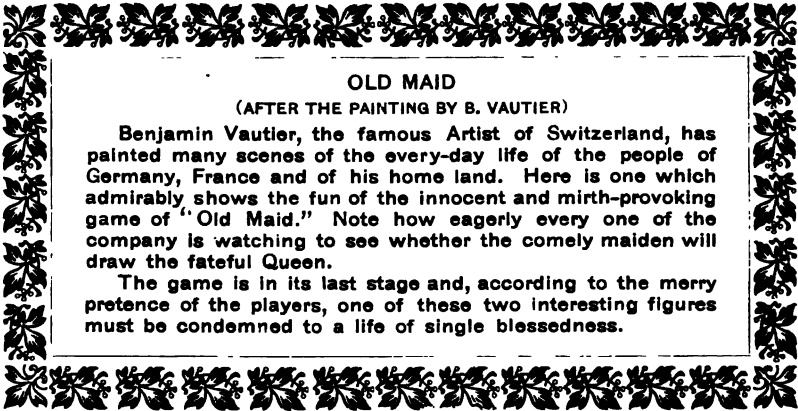
OLD MAID

Is the most innocent as it is the most amusing game at cards for young and old. It is played by any number, usually not more than six people, with a pack of cards, from which three of the Queens have been taken. The Queen of Spades being kept in the pack, is called the Old Maid. The cards are dealt one by one, and then each throws on the table all the pairs that he has in his hand. Each then, beginning at the dealer's left, draws a card from the hand of the player at his right. If the card so drawn matches any that he has, the two are thrown on the table; otherwise the turn passes to the player at his left. When all the cards have been matched excepting the Old Maid, the player holding that card is said also to be the Old Maid. Much of the amusement of the game is caused by the efforts of the player who finds the Old Maid in his hand so to place her that she will be drawn by his neighbor.

BILLIARDS.

BILLIARDS is a mathematical game, and affords scope for the exercise and practical development of a steady hand, a clear head, quick perceptions and a pleasant exercise of the calculating powers. As a means of regaining impaired health it cannot be excelled. Sir Astley Cooper said of it, "We should all sleep the more soundly if we made it a rule to play billiards an hour or two each evening before going to bed;" and a well-known American physician, Dr. Marcy, writes what should be pondered by parents all the world over. He says: "One of the pleasantest and easiest means of regaining and retaining health is to introduce into private houses a billiard-table, and to present it to the *entire family*—men, women, and children—as a means of daily exercise and recreation. The most indolent and stupid will, by practice, soon acquire a fondness for the





OLD MAID

(AFTER THE PAINTING BY B. VAUTIER)

Benjamin Vautier, the famous Artist of Switzerland, has painted many scenes of the every-day life of the people of Germany, France and of his home land. Here is one which admirably shows the fun of the innocent and mirth-provoking game of "Old Maid." Note how eagerly every one of the company is watching to see whether the comely maiden will draw the fateful Queen.

The game is in its last stage and, according to the merry pretence of the players, one of these two interesting figures must be condemned to a life of single blessedness.

game; and the improvement in the sanitary condition of those who habitually indulge in it will commend it in the strongest manner to the heads of families from a *moral* as well as a *sanitary* point of view. Young America is naturally 'frisky,' naturally enthusiastic, exuberant, and fond of excitement and fun. Confine him in the house without diversion and excitement, and he mopes, sulks, pines, and sooner or later breaks wholesome parental restraints, and instinctively seeks for amusements, excitements, and pleasures elsewhere—at the club, the play-house, the restaurant, and too often the gambling room. These natural instincts for diversion may be directed in such a manner by parents as to be productive of positive physical, moral, and intellectual benefit, *by investing home with a few of the attractions which beckon them elsewhere.* Give them comfortable billiard-rooms and billiard-tables, so that body and mind can be amused and invigorated, and *the attractions and pleasures of home will be superior to those beyond its boundaries."*

BILLIARDS PROPER.

In billiards proper, there are four balls, two white, one being distinguished from the other by a black spot, and two red, one dark and the other light; but experts and professional players usually play games in which only three balls are needed, two white and one red. Each carom table has on it two spots, along an imaginary line drawn lengthways through the centre from the middle nails or "sights" in the head and lower cushions: the first, opposite the second "sight," is sometimes called the light red spot, the second, opposite the sixth "sight," the dark red spot, because they mark the positions of those two balls in the opening of the American four-ball game. On pocket tables there is a third spot three inches from the lower cushion, on which the white ball not played is placed on opening the game and after being pocketed; and other spots are used for playing pool and the English game. A line supposed to be drawn across the table through the light red spot is called the string-line, because it is used in "stringing" for lead—that is, choice of balls and first play; each player plays a ball from within this line at the head of the table against the cushion at the foot, and he whose balls stops nearest the head cushion on the return wins the choice.

The four-ball, or American game is played on a carom table for 34 points up. But the game may be for any number of points agreed upon. The leader plays his ball from within the string line, so as to pass the dark red ball, but not rebound past it or strike it. His opponent then plays his ball in like manner, attempting to strike the white ball, and one of the red balls. If he strike the two balls, it is called a carom, and counts one point. If he strike all three balls, he counts two. The striker's ball may rebound from a cushion any number of times before the carom is completed. As long as the striker can carom he can continue his hand or inning. The obligation to hit the white ball first holds only in the opening stroke, and afterwards during the game each may play his ball at any of the other balls.

There is but one red ball in three-ball Billiards, or French caroms, which is "spotted" on the lower spot. One white ball is placed on the upper spot, and the player who has first turn places his ball not more than six inches from it and within the string. The first player must hit the red ball with his own before striking his opponent's ball (though only at the opening stroke, as in the four-ball game). In other respects the game is like the four-ball game.

In the Balk Line Game four lines are drawn on the table each at a distance of eight to fourteen inches, as may be agreed, from one of the cushions, forming eight compartments or spaces. Not more than two successive caroms can be made on object balls the centres of which are within any one of these spaces.

All these games can be played by three persons, if they use alternate white balls, or four if they are divided into sides, those on the same side using the same ball in turn.

The Pocket Game is played on a six-pocket or a four-pocket table, the side-pockets being sometimes omitted. If the cue-ball strikes the object-ball so as to drive it into a pocket, or "pocket it, it is a "winning hazard" and counts a point. If a player tries to pocket a ball and fails and does not carom, his inning comes to an end. Caroms count as in the ordinary game, and the winner must make 100 points.

RULES OF BILLIARDS.

1. In stringing for lead, if a player's ball touch his opponent's after the latter has stopped, the former loses choice and lead. If the balls strike while both are moving the players must string again. In stringing, one ball must not reach the bottom cushion before the other is in motion.
2. In the lead, if the ball led do not pass the dark red ball, or if it bound back past it, or if it jump from the table, or strike either red ball, the leader's opponent may take the lead instead, or he may place the offender's ball five inches from the centre of the lower cushion, or require him to lead over again.
3. Should the first player fail to hit the white ball first, or if any player during the game fail to hit a ball, a point is added to his opponent's score.
4. If a player's ball goes off the table, a point may be added to his opponent's score, and the ball remains off the table until its next turn. But, in the three-ball game, no forfeit is required, and the ball is "spotted." If possible it is placed on the spot at the head of the table; if that be occupied, on the spot at the foot, and, if the latter be occupied, in the centre of the table.
5. Balls forced off the table shall be spotted as above, but each ball must be placed on its own spot if possible. The cue-ball if it go off the table must be played from the string, as at the opening of the game. When the cue-ball is thus played it must not be played directly at any ball or cushion behind the string line.
6. Should a player play with the wrong ball, he cannot count, and the position of balls must be transposed, unless the player has made his second stroke before the error is discovered; in which case he may continue to play with the same ball, or have the balls changed. But at the end of the run the position of the balls must be transposed.
7. Should both white balls be off the table together and a player pick up the wrong one, and play with it, the stroke is good.
8. The striker must not play till every ball on the table is at rest.
9. The cue must be withdrawn before the cue-ball touches the object-ball.
10. The cue must touch the ball but once.
11. The player must keep at least one foot on the floor while playing.
12. No player can score by a play violating any of the four preceding rules.
13. If the cue-ball is touching another ball the player must play first upon some other ball than the one the cue-ball touches.
14. In the Three Ball game the balls are generally "spotted" when the cue ball touches another, and the striker plays as in opening the game.
15. If the cue-ball touch two balls or more so that it is impossible to play first on some other ball, the balls must be spotted as at the beginning of the game, and the player whose turn it is may choose whether he or his opponent shall lead.

BAGATELLE.

Bagatelle is played by any number of persons with cues and balls similar to Billiards, but narrower, on a table 10, 12, or 14 feet long, cushioned only at the sides, or on a cloth-covered board, which can be laid on an ordinary table. Nine balls, two of which are colored, are used. At the lower end of the table are nine cups or pockets which are numbered, and in front of the holes is a spot on which one of the colored balls, often called the King Ball, is placed. At the upper end of the table is another spot, and between it and the holes a line called the string line, as in Billiards. Each player in turn plays his eight balls, one by one, the colored one first, by placing each on the spot behind the string line and striking it with his cue, as in Billiards, toward the holes. The object is to place the balls, including the King Ball, in the holes, and the player scores the number of such holes he can fill, the colored balls counting double. Thus the highest score would be 62, made by filling all the holes, the colored balls being in the Nine and Eight holes. He wins who scores most points in a number of rounds agreed upon before the game. If any ball rebounds beyond the string line, it must be removed from the board till the next player's turn. At the end of each turn the board is cleared, and the King Ball placed on its spot, as in the beginning. The three-ball game of Billiards may be played on a Bagatelle board, caroms counting one each, and each hole its proper number as in ordinary Bagatelle.

The French game is different. The score is one hundred. Each player, unless they are divided into sides, and then only one of a side, rolls up for the "break." The red ball is set on the spot, and the player, grasping the eight white balls in his hand, rolls them up. The sum of the cups into which the balls enter is ascertained; and the one who has the most in this way, plays first. The red ball is set on the spot, but to miss it scores five to the opposite party. Whenever it is not in a cup, the red ball must continue to be hit by the player, under a like penalty in case of failure. If it be pocketed, he must aim

at and hit any white ball out of cup; and, if he fail in that, the opposite party scores one. Should both his balls go in, and there is no white ball out of the cups, one is taken from those not played, and placed on the spot for him to aim at. So long as the player puts a ball in a cup, he plays on; and what he makes is counted to his score. When his stroke cups no ball, he gives way to the next, and so on, in succession. When all the white balls are played up, and the last one played makes a cup for itself or another ball, provided it hits a white ball in doing it, the white balls are returned, the red ball replaced on the spot, and the same player takes the break and plays on. If the last ball effects nothing, the next player in order takes the break. Whoever first scores one hundred is out. The highest number to be made by any one player, by cupping all the balls, would be one hundred and fourteen, the red ball being in the centre, and counting thirty, and the others in the next largest numbers, from 14 to 7, inclusive. This is rarely, if ever, done.

As you may often best succeed by cushioning and caroming, the study of angles is necessary in this game, as in billiards.

PHYSICAL TRAINING

"The first wealth is health."

—*R. W. Emerson.*

Some good people object to Physical Training; they are usually of the order of the lady who wrote the following to a teacher:

"Miss Brown:—You must stop teaching my Lizzie fiscal torture, she needs yet reading and figors wit sums more as that, if I want her to do jumpin, I kin make her jump."

WHY WE SHOULD GIVE OUR CHILDREN PHYSICAL TRAINING.

BY

JOHN MASON TYLER, PROFESSOR OF BIOLOGY AT AMHERST COLLEGE.

ONE hundred years ago the population of New England was scattered in small villages and isolated farms along the shores and on the hillsides. It was largely of Puritan English stock, the toughest and most vigorous which the world has ever known. Some were fishermen or sailors, most were farmers. The harvest was abundant, but was gathered only after hard labor. The forest had to be cleared, stones removed and piled in walls, buildings had to be erected. This work was practically universal. There were endless chores for boy and girl. Woodpile, barn, garden, and farm furnished more physical training than the boy desired. Dairy, kitchen, and household cares strengthened the muscles of the girl, enlarged her lungs, and ensured health and vigor.

Pleasures and recreations were simple. Fishing and hunting, sugar making and huskings, musters and road-mending, are fair examples. The struggle was severe. Many infants died; only the strongest survived. Men died from hardship or exposure. Women became morbid or insane from monotony, repression, and overwork. But the weariness was mostly muscular. The strain fell on the heavier, lower, and stronger nervous centres. Of brain exhaustion there was little danger. Such a life of rude, strenuous, muscular effort, mostly in the open air, resulted in a tough, sturdy, vigorous race. Life was far from ideal. But the picture has its lights as well as its shadows.

Let us glance at present conditions. In 1790 one-thirtieth of our population lived in towns or cities of over 8000 inhabitants; in 1880

nearly one-quarter. Let us freely grant what many would deny, that the city may be as healthy a dwelling-place for adults of the upper classes as the country. What of the tenement districts of the very poor? Where are the children of the middle class to play in the open air? The yard is hardly as large as the parlor. The street is dangerous. They may walk in the boulevard or the park, provided these are accessible, and they will keep off the grass. This is surely a very poor substitute for free range of the field and forest of the farm.

A second and more important fact is that most of us, as fast as we can, are exchanging a life of muscular effort in the open air for a sedentary life of brain labor indoors. The farms are being deserted; office, desk, and store are crowded. We avoid manual labor, if we do not despise it. This tendency will surely continue.

The hurry and worry, the crowding and competition, the longing for luxury, the boundless opportunities of the day, have vastly increased the strain of modern life. And this strain bears heaviest on the youngest, most complex, and least stable centres of our nervous system.

The revolution in our modes of life disturbs the balance and working of all our organs. Our energy and vigor, in one word our vitality, depend ultimately on the health and strength of stomach, heart, lung, and kidney, far more than upon the extent of our learning or even the discipline of the intellect. These absolutely essential vital organs owe their development and present power to the demands and stimuli of the muscular system. It was sensation and motion, not thought or learning, which laid the foundation of the brain and stimulated the development of all its centres. Our internal vital organs can and will respond to all reasonable demands of our muscular system. It is an inherited habit. When they arose, muscle and not brain was on the throne of the body. Compare the effect of an hour's walk or other muscular exercise on heart, lungs, digestion, and assimilation, with that of an hour's study or thought at the desk or in the office. Our vital organs require these customary motor stimuli to maintain them in a healthy condition. Without them, as in sedentary life, they degenerate and invite, if they do not produce, disease. One-third of the weight of our bodies was not put into muscular tissue with the intention that only a few ounces of muscle in throat and fingers should be used with any regularity. Dr. Baxter, in his report of the Provost-Marshal-General's bureau, tells us that nearly three-quarters of all teachers examined as to their fitness for military service in the war of the rebellion were rejected as unfit; of physicians and clergymen, two-thirds; of laborers, farmers, and fishermen, one-third or even less. He tells us that there is a steady increase of disease as we ascend the so-called social scale from the man who works with his heavy muscles only to those who rely on cerebral to the practical exclusion of muscular work. Even if, as Dr. Baxter thinks, the profession is the refuge of the weak and not the cause of

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their weakness, the child of the professional man is likely to inherit a low tone of vitality.

As the muscles are less used, and the sensory portion of the nervous system gains the upper hand, so to speak, over the motor, a hypersensitiveness to discomfort and pain results. This tends to produce timidity and hesitation, and is an important element in hysteria and other forms of nervous disease, as well as a symptom of general weakness. "Health," says a great physiologist, "comes in through the muscles, and flies out through the nerves." Sedentary life and excessive brain labor are fruitful occasions or causes of disease. These conditions have resulted in similar, perhaps more marked, effects in our American women. What well-bred woman of to-day ever thinks of using the heavy muscles of trunk, shoulder, or thigh? The fathers and mothers have sinned, and too frequently the children's teeth are set on edge.

The decrease in the use of the heavy muscles reacts upon the digestive and assimilative powers. The sedentary man craves concentrated and easily digestible food. He eats a large amount of lean meat, cannot tolerate fat, and dislikes vegetables. He takes into his system more albumen than the body can use. The excess of albumen throws a heavy strain upon the kidneys, and Bright's disease and other evils follow. The kind and amount of food and the lack of exercise result in constipation. Nervous dyspepsia, twin-root of almost any conceivable evil, is likely to follow. We regard the bill of fare of our sturdy ancestors with horror. Pork and beans, pies and doughnuts, are not milk for babes. But is such a ration as sore an evil as a digestive system which cannot digest anything more refractory than tea and educator crackers?

Two classes of children demand especial attention to-day. First, the children of the business and professional classes. Second, the brighter and more ambitious children of every class. Both these classes will probably enter business or professional life. A sound and vigorous body and a tough nervous system are absolutely essential to their life and success. These the farm used to furnish. What is our system of education doing to ensure this to the rising generation in village, town, or city? The child begins going to school younger, and the school year is almost three times as long as it was one hundred years ago. We are now planning summer schools to keep him busy and to take him off our hands for the rest of the year. The school-room is properly warmed and ventilated, fitted with fine desks and all appliances for instruction. Books, paper, and pencils are furnished in abundance. All this is excellent. What are we doing for the physical health and welfare, for the body of the child? Our chief efforts are directed to make him sit still as long as possible. "But," you say, "keep the child under favorable surroundings, and health and growth will come of themselves without our thought or effort." Is this true?

The human body is a very complex structure of many parts and systems. Health and vigor depend upon a symmetrical, well-balanced growth and development of all its organs, especially of the neglected vital organs. The weakest part ought in some way to be made as strong as the rest. Different organs and systems develop successively to a certain extent. Every organ has three stages of growth. During the first stage it is incapable of any work. Growth is its whole business. During the second stage growth is still the chief business, but proceeds regularly and in a healthy manner only when stimulated by the right amount of suitable exercise. In the third stage the organ is approaching maturity, and is benefited by more severe training and testing. During the second stage of growth a suitable amount of exercise, neither too much nor too little, is absolutely essential. The real business of the educator is to discover what organ requires exercise during every successive year of the child's life, and then to furnish exercise suited in amount and kind to the needs of that organ.

The great defect of the systems of education planned and arranged by students of adult psychology is that they neglect the fact that the child is not an adult; and that they leave out of account Nature and her laws of growth. The material progress, success, and wealth of the present century are due largely to the fact that we have learned to take nature into partnership with us, and to allow her to do our heavy work. Rivers, coal, a few gallons of oil or gasoline, do the work of an army of horses or men without weariness. Why do we refuse to take nature into partnership with us in educating our children and youth?

We all know that the chief, if not the only business, of the young child is to grow. All that the Bible ever tells us of the childhood of its mighty men and heroes is usually the fact that the child grew and waxed strong. A little more growth in childhood may mean a man or woman far above the average. A well grown, well developed, perfectly healthy man or woman is many times as effective, and probably worth tenfold as much as one who has attained somewhere near the full amount and use of power. Growth must furnish all the material which is to be shaped in the processes of future development. Growth during childhood depends upon suitable exercise. What are home and school doing to promote growth?

When a child needs food, it feels hungry; when it needs water, it feels thirsty. We respect these cravings of the child. We recognize that they are natural and healthy. We supply the need. When the muscular system hungers and thirsts for exercise, when the child is restless and cannot sit still, we have to do with a similar healthy, natural, physiological craving. The exercise is evidently needed to stimulate and maintain a healthy growth. We ought to respect the craving and furnish the exercise.

The child in kindergarten is eager to see, to feel, to handle. His sensory organs crave exercise, and we satisfy the craving. He enters

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school at six. He is so restless that it is almost impossible to keep him quiet. We succeed after a mighty struggle. We busy him with language and number work after the schemes laid down by the wise men who forgot to assign or leave any time for physical exercise. The mental powers crave very little exercise at this age. Study and thought do them very little good, and if prolonged considerable harm. The child makes slow progress. We lose the opportunity, offered by nature and urged by the craving for movement, to stimulate bodily growth. This loss can never be made good; the opportunity does not return.

During the years between six and ten the playground is the most important means of educating the child. Here he runs and jumps, and uses his heavy muscles freely and vigorously. The use of so much muscular tissue stimulates heart and lungs and all the vital organs, on whose full growth life and vigor depend. It maintains or improves the appetite and digestive power so that the large needs of the body for nutriment are well and fully supplied. The child grows.

The use of the heavy muscles stimulates the growth and development of the fundamental nervous centres in the brain. It strengthens them so that they can resist hysteria and nervous weakness or collapse. All these modern diseases and ills can and must be prevented by fortifying the child in the primary and intermediate grades, or even in the kindergarten. This is nature's time for strengthening these centres and accomplishing this grand result.

The game has its mental value and use. It rouses the sense organs, and focuses the attention, the first lesson in training the will. The child must size up the situation and grasp the opportunity instantly and once for all. He cannot "stand shivering on the brink of action," as the adult so frequently does. He must act on his own initiative. There is no one to constantly tell him what to do, or more frequently, what not to do. He becomes ingenious and resourceful, and attains skill and strategy. He forgets himself, and loses shyness in the game. On the playground he learns far more than the rudiments of the science of success in life. Waterloo was won at Eton, more on the playground than in the schoolroom.

On the playground the child learns to get on with his fellows, no easy lesson in these days of small families. He learns self-reliance, self-control, fair play, and many other fundamental virtues. No wonder that "the boy without a playground is father to the man without a job." Here too the earliest and often the strongest friendships are formed which brighten his whole life. No half-hour at the desk can give at this age so many and so valuable returns as the one spent on the playground.

Watch children at play and you will see that periods of vigorous exercise alternate frequently with those of rest or entire change. The child evidently tires quickly. The eighth year has been called the "fatigue year." If this is true of the muscles used in play, it must be

true to a greater extent of the far more immature and easily fatigued centres of thought and intelligence in the brain. One result of the book-work and confinement in the lower grades is "brain-fag" and lasting aversion to books and study.

Is play or some form of physical training of any less importance to the boy and girl in the grammar grades? The tenth year in the life of the girl, and the eleventh of the boy, are years of very slow increase in both height and weight. The year of rest and economy is followed by a period of three or four years of rapid increase in height. Acceleration of growth in girth and weight usually begins a year or more later.

Growth is always an expensive process. It demands the combustion of a large amount of material to add a little to the weight. Growth in height is especially expensive. It begins in the bones. These increase in length; and all the muscles, nerves, and arteries must be correspondingly lengthened and adjusted to the new conditions. These additions and changes demand a large amount of food, and result in the production of much waste. The food must be digested and the waste removed by organs in the trunk. But this is growing far less rapidly than the legs and arms. Relatively to the length of the body, the length and girth of the trunk are smaller now than at any other time in life. Similar proportions in the adult would be symptoms of weakness, if not of disease. It is a trying time, a period of weakness and of feeble resistance and endurance.

This is the beginning of the critical period of puberty. Now comes a metamorphosis almost as marked as the change of the caterpillar into the butterfly. Almost every organ in the body is affected, if not greatly changed. The changes in the girl are probably more profound than in the boy. They occur earlier, before we expect them. They are accomplished in a briefer time, and hence are more rapid. Her pubertal period is far more likely to be stormy, and her rate of morbidity is considerably higher. Her future health and happiness, if not her life, depend upon the successful completion of this metamorphosis during the trying period of rapid increase in height. Slight injuries or defects may now be easily remedied which, if neglected, will result in temporary or permanent weakness or invalidism.

The rapid growth in height and the profound changes in the vital organs involve much destruction of nutriment and of tissue. If this waste is not rapidly and completely removed, it poisons the blood, depresses the nervous system, produces disinclination to exercise or effort, reduces the appetite and the assimilative powers. Headache, loss or disorder of appetite, pallor, nervousness, and general weakness follow. The best authorities find that, while the death rate during this period is very low, the amount of chronic disorder and weakness is greater than at any other time during life.

The waste will not be removed until it has been thoroughly oxi-

dized by an abundant supply of air taken into the blood through the lungs. Hence the most important question concerning a boy or girl during this period is not: How large is the brain? but, how great is the lung capacity? Whether this is as large as it should be in the average boy we do not know. We may safely take it for granted that it is not excessive. The girl at this time has the same weight and height as the boy, or a little more. She needs as much oxygen as he, perhaps even more. The average girl at this age has for each pound of weight hardly more than three-fourths of the lung capacity of the boy of the same age. At no period of her life does her lung capacity increase so rapidly under suitable gymnastic exercise, as Anderson has proved. This quick response to exercise is proof positive of its need. Gilbert observed that during the pubertal period dull pupils of all ages had a smaller lung capacity than bright ones. Many a girl during this period is dull and falls behind in her studies, not for lack of application or effort, but for lack of sufficient oxygen in her lungs and exercise in the open air. This is cruelty.

About this time the girl's brother joins a baseball nine, while she frequently ceases her outdoor games altogether. Sometimes she still plays a game of tag, but is usually ashamed of this relic of childhood. She is very fortunate if she is not continually warned by teacher, mother or aunt, that running, jumping, and romping are more befitting a tom-boy than a young lady. She gives up the play habit and forgets the art just when she most needs them both. The man or woman who would discover or invent attractive games furnishing convenient and suitable exercise for girls of this age would be the greatest of public benefactors. The critical period of the girl's life is between ten and fifteen, not later as most of us have supposed.

We have said very little about the boy. He needs the exercise just as much as the girl, and he usually gets it. But there is the shy boy, the bookish boy, the boy who does not know or care to play. All these require physical training of some sort. If they will not play, they must be made to join classes in gymnastics.

Some one has said that play is food, but that gymnastics are medicine. This is an exaggeration with a good grain of truth in it. For the earlier grades play is better than gymnastics. But as the boy and girl grow older they need the gymnastic training to correct defects of action and posture, to give complete control of the muscles, and to train the muscles or motor nerve centres to grace and precision of action. Hence in the high school gymnastics are of great importance, while play and athletics should not be neglected. Also, the more of the play element we can bring into our gymnastics, the greater will be the results of the exercise.

The trained athlete not only has a greater reserve of strength and power, but he uses his energy with far greater economy. He makes no useless movements, and wastes no energy in friction. His joy in his work and his confidence keep him calm and ward off worry. It is

a pleasure to watch him work or to work with him. But this power cannot be attained by one-half hour's exercise each week. That is about as useful as to attempt to fatten a man by giving him one small meal each day. If health, strength, power, and efficiency are worth anything, it is worth our while to spend a little time on them. It is profitable to the town or city to spend a little money on physical training in all the grades. At present in every spasm of economy the teacher of physical training, and there is rarely more than one, is the first to be discharged, and the teacher of music follows. The wise old Greeks knew that physical culture and music were the most important parts of the education of every citizen. If our schools are to be institutions of power and efficiency as well as of learning, we cannot afford to neglect physical culture and training. If our homes are to be nurseries of heroes, we must see to it that the child plays well and cultivates his body as well as his mind. Learning will not suffer because the brain is housed in a powerful and healthy body. The state will be richer and safer because it has a healthy and vigorous race of fathers, mothers, and citizens.

FAULTY POSITIONS IN THE GROWING CHILD AND HOW TO CORRECT THEM.

BY

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THERE can be no doubt that the harmful influence of faulty posture upon the development of the young is too imperfectly understood or at least is too generally disregarded.

In the majority of cases where the lack of symmetry is marked the cause can be directly traced to faulty posture in standing, sitting, or sleeping, together with a muscular development lacking the power to resist the uneven strain forced upon it by the changed conditions. It is also true that where these faulty habits of posture are detected in the early stages, the correction is comparatively simple, but when the bad habits are continued year after year, and the different muscles have accommodated themselves to the abnormal positions, and the brain centres have been falsely trained as to what constitutes erect posture, it is a work of years even to approach a correction.

Some of the most common and the most harmful habits of posture into which young people, particularly young girls, are liable to fall are:

1. Standing on one foot with the other extended to the side in such a way as to lift one hip higher than the other, to preserve the equilib-

rium of the body; the head and shoulders must assume an unnatural position and the symmetry of the entire figure is destroyed.

2. Standing with the weight over the heels, dropping the chest, allowing the shoulders to droop forward thus making the shoulder-blades unduly prominent; as a result of these changes the hips move forward, bringing the abdomen into prominence and the head loses its natural poise.

3. Sitting habitually upon one foot, or sitting at a desk with one arm on the desk and the other in the lap will also produce a difference in the level of the shoulders and hips.

I have chosen to mention these well-known bad habits because, being so very common, they oftentimes pass unnoticed or are not recognized as important factors in destroying the symmetry of the body or, owing to a concentration of interest in other directions, are entirely disregarded. The youth who aspires to a position on the football team is much more concerned about his ability to "stoop low" than his ability to stand erect. The young woman intent only upon becoming the best basketball player in college is in danger of becoming careless as to good carriage, while those who care only for study and actually dislike exercise of all kinds, are apt to ask the question, "What is the use so long as one is well?" No one would reason in this way regarding the growth of a plant, a tree, or even an animal. The single fact that lack of symmetry is contrary to the normal development of the human form, not to mention the awkward walk and the stilted movements of the individual who has not full control of his body, should appeal to all as a sufficient reason why attention should be given to the posture of the growing child. Nature has decreed that we may not all be beautiful but, barring actual deformity, and the effect of disease, with a little care at the proper time, we may have erect and symmetrical figures, and with this will come grace and a pleasing presence, which no one will deny are valuable possessions apart from their hygienic worth.

The limits of this article will only permit a simple description of what constitutes a good standing position, and a few general hints as to the most direct method of training the individual out of his bad habits of posture.

Seen from the side, a person standing in the correct position will show the lobe of the ear, the point of the shoulder, the crest of the hip, and the instep in a straight line, and the weight of the body will be carried over the arch of the foot. The easiest method of putting the body into this position is to *stretch upward*. As a help in directing the stretch, a book may be held a little higher than the actual height of the individual and he be encouraged to try to touch it with the crown of his head, then raise the book higher and let the effort be made to touch the object by rising on the toes, taking care that when the heels are lowered again they touch the floor very lightly. After one has practised this exercise several times, it will only be necessary for him

to make the effort to stand and walk as tall as possible, and the result will tend to bring him into correct position. If parents and teachers will encourage this "standing and walking as tall as possible," they will be able to do much toward overcoming the tendency to "slouch," or to "lop on one foot."

Hanging by the hands, with the feet stretched downward, and the head thrown backward, is also a good straightening exercise.

For the child who has a tendency to flat chest, encourage games of ball similar to the old game of scrabble, where a ball is thrown high in air and all endeavor to catch it as it comes down; as a result the head will be thrown backward and the chest elevated and rounded forward.

Breathing exercises, with the hands on the chest, then breathing with hands on the sides, at the height of the lowest rib, will also help to increase the chest capacity in all directions.

These exercises are very simple, very well known, and very easily performed, but when used faithfully, and when each relapse into the old position is quickly corrected, they will prove beneficial.

PHYSICAL TRAINING OF YOUNG CHILDREN.

BY

M. FERNAN LAGRANGE.

INSTINCTIVE gymnastics is, from the hygienic point of view, the best adapted to the regular development of the child. It is not liable to any of the objections we have brought against gymnastics with apparatus. It cannot deform the body, for it is made up of spontaneous movements, and conformed to the natural office of each limb. It does not localize the work in a particular region of the body, for all the limbs are instinctively invited to take their quota of exercise; and it does not seduce the child into efforts touching upon the limits of his strength. Instinct also invites him to the kind of work which is best adapted to his particular aptitudes for resisting fatigue. He has a natural disposition to perform light but frequently recurring acts, quick motions, which put him out of breath, while exercises with apparatus rather exact slow and intense efforts that bring on local fatigue. Now, all observers have noticed the wonderful facility with which a child recovers his breath, and his impatience of local fatigue. Finally, natural exercise, being the satisfaction of a want, is by that very fact a pleasure; and joy shines in the face of the child who is playing freely.

The partisans of artificial gymnastics object to this method that it does not give in mature age the great muscular force, the capacity

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to bear fatigue, and the refined dexterity of movements—the various athletic and acrobatic qualities, in short, that should result from a complete physical education; and they assume that these superior qualities of the picked man, to be given the fullest vigor, should be cultivated from a tender age. They fall into the mistake, which is too often made in physical education, of not distinguishing between methods of development and perfecting processes. The physical education of the child, up to his fifteenth year, should have for its sole object to favor the growth of the body in all directions, particularly in height and weight; the perfecting of the structure of the organs, and the training of them by methodical exercise to a more complete performance, should come later on. The fourteenth year will be early enough to begin more energetic motions for hardening the flesh and developing the muscles. Till that age, physical education should especially aim to remove from the child all influences that may be in the way of the free expansion and growth of the body. Among these harmful influences are two of opposite character that produce nearly identical results—want of exercise, which makes the child emaciated, and excess of work, which stunts him.

This important distinction between developing and perfecting hygiene is well understood and observed by horse-trainers. They give colts nourishing food, free air, and room to gambol; and do not begin training them for work till they have acquired bodily growth and substance.

If natural gymnastics is enough for the animal, we may conclude from analogy that it would be amply sufficient for the child, if he had the conditions of space and time that are indispensable to the satisfaction of the instinct that impels him to exercise. When, then, the social conditions to which the child is subjected do not permit him to indulge in instinctive exercise, gymnastic methods as like as possible to those which instinct suggests should be sought for him.

The form of exercise that comes nearest to natural exercise is playing. It is nothing else than a more or less methodical regulation of the instinctive emotions, such as every living being is prone to execute spontaneously when he feels the stress of the want of exercise. It may be called a natural exercise, for we see the young of every species of animals playing with one another, and may even observe their parents inciting them to play. The teaching of games, which we find in all countries and ages, originates, we may suppose, in this tendency of the living being to educate his progeny physically by exciting him to enjoy himself in motion. Play, in the progress of civilization, has taken various forms, and has been subjected to methods that tend more and more to introduce into it an artificial element. Hence, sport has been developed from games; the exercises called sports are in general simply games that have taken a more methodical form, permitting a greater display of muscular force, exacting more complicated motions and a longer apprenticeship. It is

sometimes hard to draw a clear line between sport and play. Fencing, equitation, and canoeing are varieties of sport. Cricket is as much a play for children as an exercise of sport; in short, in the hygienic view, sports are half-way between gymnastics and play, and are therefore more suitable to youth than to children.

Games give the form of gymnastics most congenial to the conditions of social life, for they are at the same time hygienic and recreative, and are as well adapted to the physical requirements of the child as to his moral needs. Physically regarded, they demand neither very intense efforts nor localized muscular contractions. Even the most complicated of them call out nothing more than combinations of simple movements and natural attitudes; while gymnastics necessitates abnormal combinations in the association of the muscles, with movements which the child, having never practised, has to learn laboriously. Play presents no difficulties comparable to those offered by gymnastics. If the child has not yet become adept in the game, he will play badly and lose his part; but he will play, and will at least gain the physical advantages of exercise. But when he is dealing with the abnormal motions or "turns" of gymnastics, if he has not yet learned the way of executing them, or acquired the knack, which it often takes a long time to gain, he only makes a pretence of exercising, and his effort is limited to a fruitless tentative, without any effective activity.

Besides the support of reason and observation, the method of exercise by playing has the sanction of acquired facts. It was the only children's gymnastics at the beginning of the last century, and even now some nations have no other settled method of physical exercise. The English have never taken to gymnastics with apparatus; and the Belgians, after having tried it, are abandoning it and returning to play. No one can question the excellence of the results of the English method; the vigor and endurance of English youth are universally recognized, and their school-games constitute their whole gymnastics.

PHYSICAL CULTURE FOR GIRLS.

BY

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CULTURE of the body is as necessary as culture of the mind, and it is fitting that as precious a jewel as the mind should have a strong and perfect casket.

Health is not simply the absence of disease, but the perfect condition and harmonious action of all parts of the organism, and the object of physical culture is to develop it to the highest degree.

How can that be accomplished? As no chain is stronger than its

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weakest link, we naturally look to see where the weakest part of the body is in girls, in order that special attention may be bestowed there. We do not seek long before finding that every part of the body has received its share of attention except that part of the trunk which extends from about the fifth rib downward. The condition of this part, however, outweighs in importance that of almost all the rest.

The soft walls of this part of the body are made up chiefly of muscles, and these are among the most important in the body. Among other things they assist in holding the body upright.

One muscle on the back, that is intended to be large and powerful, has its thickest part at the waist. Its upper end is attached to the arm, and it is used in sweeping and lifting. *Latissimus dorsi* is its name. The muscles in front, called the abdominal muscles, are intended by nature to be exceedingly strong, as their offices are numerous, and of the most vital importance.

All these muscles in girls are found to be almost powerless for two reasons.

First, a little steady pressure on muscle, such as women's waists make, causes it to become thin and flabby.

Second, pressure also interferes with the action of a muscle and it becomes still more flabby from disuse.

That is why so many wobble at the waist, and why the belt line in girls is the weakest point in the entire body.

With a boy no clothing ever presses on these parts, the belt line is so firm and hard, from freedom and use, that it is hard to make an impression on it, while with girls a very deep dent can be made.

It is because these muscles are so strong that the boy can hurl balls, lift heavy weights, walk and play all day and never tire. In fact, he is so strong that often he hardly knows what to do with himself to give vent to his energy. As a man, it is due to the strength of these same muscles that he can lift trunks, move furniture, and do many other feats of strength.

If boys wore close-fitting waists like girls, they would be just as weak as girls, for the muscles are the same in each, and are governed by the same laws. In many uncivilized races, where but little clothing is worn, the girls and women are just as strong as the boys and men, and can lift immense weights and carry them the same as men. This proves that difference in strength of these muscles in men and women in civilized countries is by no means owing to any inherent difference between the two sexes, but comes wholly from violated laws.

The natural shape of the body is a graceful curve inwards, and not a sharp angle at the waist. That angle is made by stretching the muscles inward, and holding them there by the close-fitting bands of the skirts. The effect of this is the same as it would be with a piece of India rubber kept always on the stretch. The elasticity is lost; that is, its power is gone.

This sharp angle inwards at the waist must be classed with the

deformed feet of the Chinese women, and the forehead of the Flat-head Indians. It is much worse, however, as it causes much more weakness and disease. The tide has now turned, however, in China. They have awakened to the fact of the great loss to women, and therefore to the country, by this custom and it is now decried. It would be strange indeed if the Chinese should steal a march over civilized countries, so called, and discard pinched feet before we discard a pinched waist, which means a deformed stomach, liver, spleen, intestines, etc.

If one is pushed in at the waist, one must go somewhere, and usually it is out at the abdomen. All the inside organs are pressed downward as well, and this is the cause of so many diseases in that part of the body.

The problem of giving freedom to this part of the body is not always easy of solution. That beautiful picture of Queen Louise of Prussia descending the steps, arrayed in an empire gown, shows a model of a perfectly healthful dress. All the underclothing should be as far from touching the waist as the dress is. Then all the tender organs in that part of the body would be protected. The soft walls, you understand, make that protection necessary. If instead of these pliable walls there was a covering of bone, as the skull covers the brain, the hanging of clothes there would not be so dangerous.

The women of Norway have very beautiful, symmetrical forms. Instead of a sharp angle at the waist, there is a graceful curve inwards, with a small abdomen. They do not wear corsets, and their strength and artistic forms are attributed to that fact.

Physical culture is important. While special exercises are taught for this purpose, and they are both pleasant and profitable, they are by no means a necessity, for those who engage in active household duties, as all the exercises taught for bodily development are gone through without knowing it, by those engaged in this way. There is also the added advantage of the mind being directed not on oneself, but on the work being done. It is well indeed that this is a fact, as the majority of girls do not belong to the leisure class, and have neither money nor time to spare.

So healthful is housework, that a method was devised called the "Chambermaid Cure" for some royal personages in Europe, who had nervous exhaustion simply from the conventionalities and tiresome nothings of the royal life. It was reported as successful.

The object of physical culture is health of body and mind. For special training remove every obstacle first. The chief obstacle is the pressure of the clothing at the waist and the hips. Remove this, use appropriate exercises, and health, strength, and beauty are in sight.

This pressure has been endured for hundreds of years, in varying degrees, from the vise in which Queen Elizabeth is pictured, and also others of her times, to the degree of the present day. Woman having endured this pressure for so many generations, the daughter is not

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born as strong as she would have been otherwise. She is now handicapped from infancy.

Heredity, like mother like child, is a great fact. To undo the effect of the past, and attain to a perfect physical development or culture, the motto for this part of the body should be

TOUCH ME NOT.

Come as near it as you can.

PHYSICAL TRAINING FOR GIRLS AND WOMEN.

BY

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IN considering the value of physical training for girls and young women, it is well at first to understand exactly what the term "physical training" means; next, to see how necessary it may be as a factor in education generally; and finally to decide whether it has any special significance for girls.

Popularly "physical training" is synonymous with exercise under supervision, usually in a gymnasium. This is of course a very narrow use of the term. Technically it includes training along all lines of hygiene—exercise, sleep, rest, diet, bathing, clothing. It is in the ability to give common-sense advice on all these matters and to follow up the advice with tactful and painstaking supervision, that the intelligent physical trainer may be distinguished from the drill-master.

Taken in this larger sense, the place which physical training should occupy in any educational system, whether in the home or in the school, is unquestionably one of great importance. It must be considered as fundamental. That there have been exceptionally brilliant minds in shattered bodies, does not alter the fact that the average person gets on far better in the world, and what is of more importance, is in a far better position to render service in the world, if he has a good digestion and sleeps well at night. Whatever evolution may have in store for us, we are at present burdened with bodies, and the expression of the intellect, even to a considerable extent of the spirit, is dependent on the proper functioning of these bodies.

Since this is the case, physical training should be not only the basis for all training, but should continue into the superstructure. It should begin with the cradle and end with the grave.

A recognition of this fact on a large scale is found in the increased stress which is constantly being laid on providing the public with pure food supplies, parks for breathing spaces, playgrounds, baths, and gymnasia. That this is in the long run an economy to the state

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is probably true, but it is also true that as public sentiment becomes more humanitarian the weak members of the community are preserved at great expense to the state; this imposes on each the duty of keeping himself in so good a physical condition that he may share the burden rather than himself become a burden.

If control of conditions influencing public health has become a legitimate function of the state, no less has control of conditions influencing what we may call individual health become a function of the home, the school, and the college. It is perhaps in this connection that we should seek the chief value of physical training for girls and young women, as it is in one or the other of these spheres that the majority of them are destined to do most of their work and exercise their greatest influence. If a woman marries, it is essential that she be in good physical condition, in order to bear strong children, rear the children properly, conduct with efficiency the manifold duties of the household, and with it all be cheerful without effort, and normal and well-balanced in her attitude toward life. The teacher, as in a sense the mother of many, has a great responsibility with regard to her charges, and needs above all things a good physique to bear the strain of her position.

Of the various elements of hygiene which constitute physical training it is in the matters of clothing and exercise that girls are on the whole less favored than boys. Hampered by their dress and by social traditions as to their conduct, after maturity they do not enjoy the same opportunities for free and active play. Now although in the matter of sufficient and suitable exercise girls are more usually found deficient, exercise is the department of physical training that is most easily controlled, and when once under control serves as an excellent basis for instruction in all the other departments. The school, college, and Y. W. C. A. gymnasias may perhaps be considered the most active means that we have for promoting the health of girls. These gymnasias when properly directed provide girls with systematic exercise adapted to their needs, and extend general supervision over their habits of life. Through them much useful corrective work is done in discovering and checking cases of postural spinal curvature, flat-foot, pronated-foot, etc., that would not have come to light otherwise until associated with painful symptoms; and on the hygienic side they are no less active in encouraging interest in all healthful forms of games and sports.

In brief, physical training is fundamental training because it contributes directly to the welfare of the community, the family, and the individual. It is of special significance to girls because without some definite stimulus of the sort, proper emphasis is seldom laid on several of its more important features.

THE ETHICAL VALUE OF SPORTS FOR WOMEN.

BY

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A DISCUSSION of the ethical value of sports for women involves two considerations, difficult to separate, but which must be clear in the minds of the persons who instruct in sports. The first is the value to the individual, and the second that to the community. In most of the training, up to the present time, much emphasis has been placed upon the former, while the latter is obscured in a hazy future. "That which promotes the best development of the individual raises the standard of the community," is a statement recognized in a general way by all educators. But communities maintain certain institutions, not primarily because they benefit the individual, but because they are essential to the integrity, the progress, and the very life of the community itself. "Public policy," the "general good," are some of the names in which many things are done. From the community standpoint, sports for women have a value, at least potentially, and the realization of this power depends upon those who are to train the women.

The ethical value from the individualistic standpoint may be grouped under three heads, physical, æsthetic, and psychological; by carrying the results of the training along these lines into activities other than those of the school, I hope to bring out the fourth,—the social standpoint,—and to make clear why the community should support this work for women, not only as a part of its educational system, but as a part of its recreative system, which has become so important a part of its administration within the past few years. Is it because of the purely individual development that the city maintains playgrounds with paid directors? Is it not because the city realizes that the death rate, the poverty rate, the criminal rate, and the working capacity of the people depend in some way upon the recreation afforded them, and the education which they obtain through it?

If, from an ethical point of view, which concerns both the individual and the community, we are to develop games for women, the principles underlying them must differ from those which are carried out in men's sports to-day. Doubtless the same principles are equally necessary for men and women, but men's athletics to-day should not serve as a model for women's athletics. These essential principles are:

(1) Sports must be conducted for the good of the number, and not for the purpose of getting good material for championship teams; they are not for the purpose of developing record breakers, or track winners, but that each one may have equal opportunity and training;

the end desired is not to play well in a contest, but to better fit the individual for her place in life. (2) The predominating note in women's sports should always be the joy and exhilaration and fun of playing, not the grim determination to win at any cost. Social features should be retained as a part of these sports lest they become too hard and business-like. (3) Women's games are for themselves and for their school or college. With few exceptions, the standards of women's athletic contests do not possess sufficient educational value to justify giving them before indiscriminate audiences who pay admission fees.

To maintain these principles, the training must be given with a knowledge of what may be accomplished on all four sides—physical, æsthetic, psychological, and social. The ethical value of games on the physical side is evidenced by normal living, clean thinking, and by control of appetites and passions. These result from having a sound body and an outlet for energy. I have often thought as I have watched working women trying to find this outlet in the miserable dance halls, or walking the crowded streets, that when we have public playhouses for women, where the play instinct can be satisfied through well conducted games, then we may hope for normal living, clean thinking, and self-control.

The æsthetic value of games is expressed by improved personal habits and appearance which, while bringing pleasure to others, indicate a higher standard of living.

On the psychological side, this ethical value is expressed by the developing or strengthening of mental and moral qualities, which enable the individual to direct her effort wisely and to function successfully in life's activities.

In thus outlining the value of games, I am not theorizing, but giving the experience of five years of coaching in the University of Chicago, where, with hundreds of girls, it has been possible to almost measure this growth; and from years of work with the little residents who came to the settlement gymnasias, and with whom moral development was like tracing lines on an unwritten page. Neither is this belief in the value of games limited by what has already been accomplished, for the training of girls and women in sports has not only been limited, but for the most part the instruction has been given by untrained instructors, or by men who have held the existing ideals of men's work, and not that previously outlined as essential for women.

What are some of the qualities which sports may be influential in developing? I need scarcely dwell on the physical side, for endurance, skill, precision, co-ordination, etc., are well known to result from careful training. To be able to do physical things well, has an ethical value not only in the attitude toward life which it induces, but pride in "good condition" prevents many a pitfall into which one indifferent to this may stumble.

The æsthetic value lays stress upon the beauty and good form of

games. It is essential in playing games that women stand well, walk well, run well, throw well, and have a neat, attractive appearance. The habits and manners of players on the field are also a part of the æsthetic training. Disagreeable expressions, uncouth language, squealing and yelling, crying, lying about the floor, eating between halves of games, masculinity, boisterousness,—the absence of all these are the result of emphasizing the æsthetic feature of games. New players are inclined to think any old kind of suit or color will do; that slang is the language most appropriate, and strength the main asset for a successful game. When I first introduced the rule that form was one of the requirements for making the university class teams, and that no girl who persisted in careless dress and playing could play in any match game, there was considerable indignation. Before the close of the year scarcely a girl needed a reprimand for appearance. Some girls who had been exceedingly careless admitted that improvements in street dress and manner were due to the gymnasium. The appearance and demeanor of a team is a criterion of the part which æsthetics have in the training. Certainly, by due regard to the æsthetic side, grace can be developed. I had one good basketball player who never stopped a ground ball without falling down and rolling. When I talked to her about it, she said she was "top-heavy" and couldn't help it. I took her measurements and gave her some special work, and with this remarked that she played well enough to make her class team, but for this unfortunate tendency. In less than two months she had entirely overcome this habit and was one of my most graceful players. The æsthetic side of games has appealed strongly to many of the little settlement players, who have thus had their eyes opened on a new world.

The mental and moral training by means of games opens a wide field for thought. American life offers to woman great opportunities domestically, socially, and professionally, and in each domain they strive for success. Success is based upon competition, and competition is the keynote of organized games. If this is true, one of the values of games is to maintain *fair, economic, and co-operative* rules of competition. Note the three adjectives, and it will be seen that these rules of competition do not to any extent underlie much of our modern social or business methods. And yet the athletic man who has played according to the rules of the game is ordinarily fairer than he who knows nothing of clean sport, if other things in his training are equal. Is there any reason why women in their respective fields of competition should be less fair or less in need of a training which gives them such rules of competition?

It would be impossible to enumerate all of these qualities, but for the purposes of illustration they may be grouped into mental qualities and moral qualities. In the first group are included such as observation, attention, concentration, memory, imagination, initiation, reason, and will power. These are developed most highly by the

various games of ball, from its simplest forms up to those requiring fine team work, as baseball and basketball. When the girls first begin their work in sports, they frequently have their minds on something else; they do not use their opportunities; their attention is easily distracted; they forget to play, or cannot remember their rules or their team members or instructions; they cannot foresee the results of a given play; they change their minds half a dozen times while they hold the ball; or they play "as though they had no heads on." Girls are given to imitation rather than initiation, and all sports bring out the initiative spirit. There can be but little copying of what others do, for the action must be spontaneous and usually varies from the last play made. One day last summer, while working with a squad of green baseball players—teachers, most of them—one of them made a splendid hit, good for at least three bases. She ran to first, and when she was nearly to second came back to first. In desperation and amazement I rushed to first and asked the reason. "Oh," was the reply, "I noticed the first baseman was a friend of mine, and I came back to tell her something."

An illustration of the absence of reasoning is the following: The ball had been claimed by two basketball players. Taking the ball, I said, "Heels together so I can throw it up between you, and jump for it when it comes down." Just then some one asked for an explanation of a play, and imagine my amazement when I turned back and found that each player instead of having her own heels together, had turned her back to the other so the four heels of the two players were together. And in this way they were to jump for the ball when it came down!

I have seen girls with these qualities very poorly developed grow into steady players, using rare judgment, have seen them grasp the slightest advantage, and use signal codes successfully. These qualities developed on the field are the same ones which lead to success in the social or business world. These are the qualities which characterize a player as one to be depended upon—the certainty that a player will do the things assigned to her. In the first games of basketball, how many guards stick to their own opponents? Every one plays every one else's position, and no one can tell what will be done in an emergency. During a game of indoor baseball with green players, a good hard ball was batted past centre field and went under a spring board. Two men were standing near, and as the girl ran up and saw the ball under the board, she hesitated and then said, "Would one of you men mind getting that ball for me?" Of course the result was a home run for the other side.

These mental qualities, no matter how finely developed, make a technically perfect game, but the real essence is left out unless the moral qualities are developed at the same time. These give the spirit, the enthusiasm, the life to the sport, and make it the tremendous educational force that it is. Illustrations of these are self-control,

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unselfishness, sense of honor, self-sacrifice, self-confidence, fairness, democracy of spirit, modesty, and decision.

Self-control must be learned before a game can even proceed, and the first two lessons are in promptness and obedience. Take a struggling little mass of East Side children. They want to expend their energy and show off, and they have hitherto accomplished this by chasing, shoving, pinching, and kicking, by tattling, complaining, sulking, or even going home with a "mad on." Obedience to orders is the first step out of this maze of energy,—obedience when every faculty and muscle is alert. They must listen to rules, they must play the position given, and they are fouled, relentlessly but fairly, when they do not follow the rules. In a little while they are actually controlling themselves, and preventing fouls and delays of the game. A little later comes a more advanced expression of this control. At first the girl throws too hard, or she runs too much, or she complains every time she is run into "that it is on purpose," or she makes wild plays in her desire to show off. But this disappears, and her throws are just right. When run into, she ignores it, in a friendly spirit, and she works with her team, throwing often to her rival to whom she has hitherto refused to speak. Oftentimes girls have come asking to play at opposite ends of the gymnasium because they do not like each other, and threatening, "I won't play if I have to be with her." The game, with a little skill, can invariably be managed to make them forget such differences.

It is possible to so perfect players in obedience, in promptness, and in self-control that in a game of basketball there is no halt or break whatever after the scoring of a basket, and no waiting for a line up for positions.

Through games self-confidence is taught. While all the players work together, each has her own responsibility and she must feel that she can play her position, for there is no one but herself upon whom she can rely if a ball comes her way. Decisions must be made quickly and accurately, or an "error" is the result, plainly credited to the player. On the other hand, over-confidence brings a sure defeat and can be easily detected.

If competition underlies all games, it is equally true that unselfishness is the basis of all team work. The ability to work together requires at every point an unselfish adjustment. One of the first things learned is to appreciate others' ability, for there is no time to take refuge in delusions about oneself. When a player first begins there is a great deal of egotism. *I want to play basket; I want to score; I want to play with the bigger girls; I want to make the team.* One of my greatest difficulties with little girls, who are less conscious of this egotism, is that in a new class of forty or more, every one clamors to play forward. It is to the forwards that most of the credit falls. When they have had a year's team work, this selfishness largely disappears, and if any one doubts that this result can be

brought about let her take that crude material—a settlement class—and experiment.

Unconsciously they grow from individual work into team work; *I* is replaced by *we*, and sometimes in basketball half a dozen team plays will be made before any one throws for goal. When one girl does most of the scoring during a game, it usually means that the instructor has not had in mind the ethical training, but has allowed the selfishness of one or two good players to predominate.

Closely allied with unselfishness comes the great task of developing the spirit of fair play. Fair play does not mean taking every advantage possible under the rules, or running the risk of being penalized for close violation. In every game there come opportunities when a little trick, some little mean thing or some petty act will bring an advantage. Small cheatings and petty meannesses will soon be detected by an observant instructor, and girls even more than boys should be held strictly to the spirit and rules of the game, and be judged solely by the results of their playing. A part of fair play is also to take a fair share of the blame. Among new players, one constantly hears: "It wasn't my fault;" "She did that;" "I could not help it." I had a curious illustration of an effort to take responsibility when I had a class of girls in one of the preparatory schools. I had had them but a little time, and had told them they must not cry or lose their tempers when they lost. Their first match game was an exceedingly trying one, and they lost. As one of the guards came downstairs, big tears stood in her eyes and she met one of her forwards coming up, with big tears running down her face. In a very indignant tone the guard said: "What are you crying about? You know our coach doesn't want us to do that, and besides if any one cried I ought to, for it's all my fault."

Loyalty and a sense of honor are closely linked with fairness, certainly a sense of honor—the lack of which in girls makes them the contempt of boys and the despair of men—is one of the most difficult qualities to develop. Women, by temper and by training, are individualistic, and do not at first realize their responsibility when being put on their honor. They cannot cheat, or bluff through, or get credit for things which they do not do. They cannot lay blame on others or deny their deeds. At first when they do not win, they sneak off in tears, but if sense of honor and loyalty are made to mean anything, after a little training they are to be found as a team standing together bravely, congratulating the other team in defeat or modestly accepting their share in victory. Certain rules regarding health, times of playing, etc., must invariably be laid down for girls. At first their attitude is, "If she will not catch me at it," and later, "It isn't the square thing to do when I am trusted." There is no training which girls so much need as that which develops a sense of honor and loyalty to each other, and games will do more to really make these living qualities than the ethical systems taught in a college

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curriculum. It takes the finest kind of courage to be fair, to be honest, and to be loyal, and these are absolutely essential in good team work.

We may think that little vanities and jealousies, and little unkind words or somewhat exaggerated statements have little harm in themselves; that bragging and snobbishness are perhaps pardonable under some conditions. Games try out these qualities and they appear in their exact proportion and in all their ugliness, devoid of the graces in which they are so often half hidden. A game is a well-nigh perfect democracy. Nothing is so good for the girl as to find that money, clothes, family, prestige, or "pull" are as nothing,—that they do not help her to play good ball or make a team. She stands or falls absolutely by what she is and can do, and realizes that the game makes all equal, and that she may have to shake hands with a despised social rival on the field.

Especially for women it seems to me that games have some especial advantages. Some women are abnormally sensitive and introspective or morbid, and live too much on the subjective side of life. The various ethical and religious cults which appeal primarily to the subjective self appeal largely to women. Sports are primarily objective, they afford no opportunity for analysis of feeling or consciousness of the process. The thought is upon the things to be done and not upon the doer. Every woman's club which makes it possible to have games is erecting a barrier against nervousness, morbidity, and too much introspection.

The qualities which games develop are not essentially masculine, they are but human qualities needed for human fellowship, and I have yet to see a group of girls made masculine by holding these ideals before them, and where the spirit of the training is that which I have been trying to portray. I do not mean to say, of course, that every individual trait can be strengthened, every defect removed by game work, or that games alone can do this; but I do mean to say that organized sports for women, when put on a proper basis and under intelligent directors, will go a longer way toward training the faculties and moral instincts than many of the courses of instruction which are now given the credit for doing this.

The development of these individual and social qualities depends not so much upon the game played as upon the teachers who train. Physical training has not yet been ranked where it belongs, and it is the tendency, especially among high schools, to think any one can teach "physical culture," as they call it, and it is still made an adjunct to the regular instruction in English or history or some other subject given by the teacher. Such results as I have outlined can be achieved only when the instructors know these ideals, believe in them, and live them. Many of the teachers themselves have but little better idea of what this involves. It is no uncommon thing for universities to receive requests like this from students who have had no game work

or who did poor work in gymnastics: "I have a good position offered to teach history and English in — high school, but have to teach physical culture also. Can you send me some good books on gymnastics and games, or make suggestions?" Some of the teachers who are acting as coaches came to one of the summer schools last year and did not know games had an ethical value; and there are women in charge of our young girls in basketball who have never played an organized game! What are the requirements for people who are to teach them? Assume that we agree that their duties are to develop the players individually along the lines suggested, to inspire them with the right spirit and to teach an accurate, clean game. To do this, the instructor of these sports must, in my judgment, be thus qualified: some knowledge of physiology, anatomy, psychology, and dietetics. She must love games in themselves, or in other words, have a true play-spirit. She must know her subject absolutely and unqualifiedly, and to do this she must have played under the rules, been disciplined, and be able to do that which she teaches. She must be able to *interpret* and *classify* rules, as well as to teach them (two-thirds of the athletics taught girls are inaccurately and unsystematically presented). She must possess courage, decision, fairness, and a sense of humor. She must have the gifts of interesting and managing people, of compelling respect, and must be able to inspire. She must have confidence in herself and her players, and be able to be friendly and sympathetic without being familiar. There are other desirable qualities which she should possess, but how many of the women who are instructing girls have a small percentage of these? Until they have, no fair test of games can be made from the ethical standpoint.

The social value of this training has already been indicated, in that they enable women to function more successfully in society. Every individual lives in a community more or less complex. The field of activity may be the home, it may be the shop, it may be a profession, or it may be a round of pleasure. And what happens when the girl who has had the benefit of organized game work goes into any one of these spheres? The development of these qualities not only makes her efficient, but it sets up a habit or a tendency, and when similar demands are made, the individual responds along the line of least resistance. The girl who shirked responsibility on the field does it in her home or in her occupation; the girl who gave up basketball because she could not get more than her share of praise, will still be found baiting for this indispensable necessity. The responsible, reliable player makes the same kind of a citizen. The girl who was unfair and intemperate in her games carries these same qualities over into her social or business world, and every one who lives with her or works with her is influenced by them. One of the greatest drawbacks to the work of women's organizations to-day is that they do not know what team work is. One of the great difficulties

in the homes is that women have not learned the power to adjust themselves quickly, or to know what are essential things and what are trifles. Many a community interest is sacrificed for lack of loyalty and because women so much earlier than men lose the play spirit and its inspiration. And if it is true that sports give a training of value to the community, we should urge playgrounds, public playhouses, and public gymnasias where women and girls may go for this training; and we should urge that public schools make as good provision for girls as for boys. We are facing many conditions in the home in which the community is interested. One of them is to stem the tide which is separating mother and children and interposing nurses. The absence of the play spirit, and in many instances the absolute inability to play, bears an important relation to this. The gaming spirit is growing among women, one evidence being the extent to which they play for prizes. This is the competitive spirit without the play spirit or joy or exhilaration of games. Many housewives make no provision whatever for recreation for their employees, and hold that work is not only exercise, but gives them the needed recreation. These are but illustrations of many conditions and beliefs among women, which show the great need of teaching them sports, which emphasize the ethical and moral values.

HEALTH—BEAUTY—POWER.

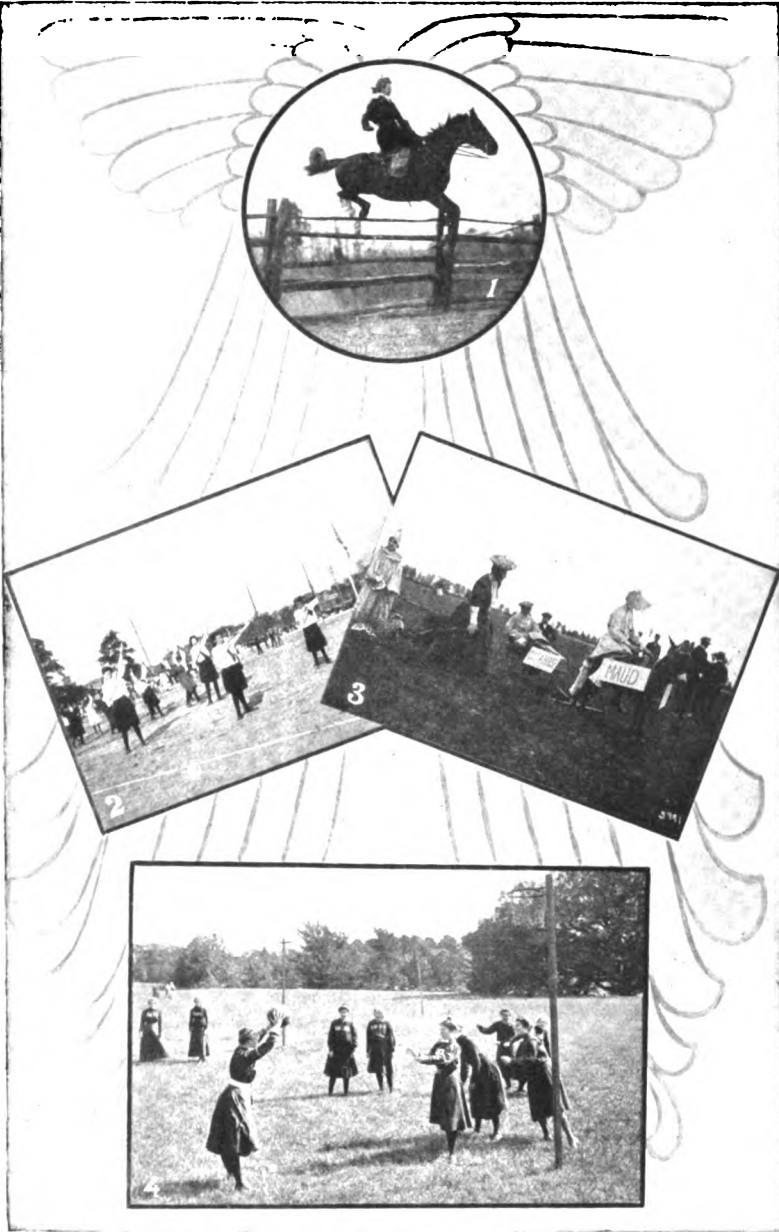
BY

DR. MARA L. PRATT-CHADWICK.

"To be strong is to be happy."—*Longfellow.*

EVERY young woman has a right to the inherent desire within her heart to be beautiful. To be beautiful, however, we must have health; and when one has beauty and health, one has power—the power to radiate and to attract; the power to do and to be—and that is life in all its richness and fulness.

And how shall this be acquired? Artificially some might say; but—among people of reasonable refinement the artificial beautifying—the laced-in waist line, the powder and paint, the rank perfumes, and the oily pomade, are relegated to the past. One still sees these artificial products among uncultured people—the uneducated, the shoddy, and often among the new rich. We shall assume, however, that we are none of these, but rather that we recognize that no carmine can take the place of rich blood's own flush; that no true grace of form comes except through ease and freedom; that no jewels can compare with clean, regular, white teeth and finely kept nails, no oil compensate for neglect of cleanliness of the scalp and the vitality of well brushed hair.



SPORTS FOR WOMEN

- 1. Cross-Country Riding. Miss Adelaide Randolph taking a fence.**
- 2. Girls at Gymnastic Drill.**
- 3. Fun In the Field—A Gymkhana.**
- 4. Basket Ball at Wellesley College.**

All these any girl may have, for they demand time and attention only.

But for the possession of health—real health—one must enter upon a more strenuous round of duties. Let us review them one by one.

Bathing.—There is more in bathing than for surface cleanliness—far more. The whole mass of tissue which makes up this vehicle, which we call the body, is constantly building up and as constantly breaking down. Not a movement of the hand but some tissue cells break down and make themselves ready to leave the body by one of the three pathways by which Nature directs the body to clean itself of tissue *débris*. Moreover, having provided the body so generously, she demands on penalty of life that every particle of waste matter be expelled.

Drink water, drink water; eat fruit, coarse grains, she urges, that there may be perfect elimination through the kidneys and digestive tract. Neither shalt thou neglect the millions of tiny tubelets that carry away in the form of perspiration so large an amount of decomposed matter.

Nor will mild bathing, with soft and oily soaps, suffice. There should be vigorous, frictional bathing; for by that only do we clear away whatever clogging there may be at the mouths of these millions of tubelets.

Moreover, this gritty soap—whatever it may be—must be thoroughly rinsed off after it has performed its service lest it remain to clog the very tubelets which it has freed.

And even this is not enough if we would make bathing serve its full purpose. Now and then there should be used the steam bath—Turkish, Russian, or, what is just as well, the home cabinet steam bath.

Especially should young people with facial blemishes resort to the steam bath, for often the blemishes disappear under steam treatment—not of the face but of the whole body. The natural accumulated *débris* rushes to those doors which are open. If then there are millions of open doors all over the body, there will be less crowding at those of the face. It is a pity that our facial specialists do not better understand this simple law, and so treat the face less and the entire body more.

Eating, and right eating, is one of the two processes by which the blood is given that from which it can make itself rich.

Breathing, and deep breathing, for by this alone is the blood supplied with the oxygen which it must have.

Exercise helps greatly here. Indeed, deep breathing without accompanying physical exercise is foolish, physiologically speaking. Exercise, and the breathing will take care of itself; but exercise vigorously—so vigorously that the heart increases its beat; the glow of bodily warmth is felt; the eye brightens and the face flushes. Torpid

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circulation is at the bottom of every known disease. Indeed, one often hears a physician say, "There is but one disease—congestion; and there is but one cure—freed circulation." And this is literally true in the early stages, before actual degeneration of tissue has taken place, of all *disease*.

Sleep—Nature's great restorer! In these days of nervous conditions one can hardly have too much of this particular form of rest for the eyes and nerves. But let us be sure that the sleeping room is cool, and that windows are open. Pile on the coverings if need be, gather them up around your ears, but let the oxygen come to your lungs freely. Let us not be so foolish as to wait until Nature's resources are exhausted before we take the simple "fresh air" cure.

Womanhood.—Over and above all these, important as is each, there is one other source and means of beauty, health, and power—all three—and that is the life force that manifests itself at fourteen or thereabout, and which brings with it, or should bring with it, that splendid glow of health and glory in the splendid vigor and brilliant glow that comes, or ought to come, with the coming of womanhood. This is Nature's crowning work, and to her it is most sacred. She gives grandly, gloriously; at this period of life, often she fills a hitherto frail body with strength and bounding impulse; she rounds out the physical angularities; she brightens the eye, and a new warmth glows; she arouses the deeper emotional life; she brightens intellect; she intensifies desire; she awakens the *soul*.

But for all this Nature demands only that the young woman, to whom this soul awakening has been given, shall respect it; reverence it; and sacrifice a little now and then to the comfort and for the good of this newly awakened organism.

Happy is the young woman whose life at this period is free and unconstrained; who may live in the open, and who is free from the artificial conditions of city civilization. Such a young woman may lay now the foundation for future health and happiness, and for successful fulfilment of life, be it in the home as wife and mother, or out in the world of competition.

During a child's whole life Nature has been storing up energy for this period of womanhood, and now it is that she brings into life and action the newly developed organisms which seem of themselves a reservoir of vigor, both physical and mental.

And Nature has very positive ideas of what she wishes done with this splendid new force that she so generously lavishes. She means that this stored-up energy of childhood, and this new activity, shall work together, acting and reacting upon each other for the young woman's future welfare. But, alas, in these days of complex living, we too often turn this new vigor into artificial paths. Our schools steal from Nature's storehouse, and then what happens? Let Nature answer. She says: I stored up energy through your childhood to make a splendid physical being—one with bounding health and

vigor; brilliant color; clear eye; and fleet, graceful, supple muscle; but you are using it for study, for society, and for a thousand things for which I care nothing. Listen to me before it is too late; else pay your price.

But does this mean that school and society shall be ignored? Not at all, only this, on two days at least out of every twenty-eight, there is that going on within the mechanism of every young woman's life which makes beauty that is the just heritage of every young woman.

In this every girl should glory. It is Nature's convincing work in the individual, and to her it is most sacred above all else in the universe for her health, and beauty, and power. No sacrifice is too great, if great sacrifice be demanded, for healthy womanhood is precious above all else in the human economy.

Dr. Stanley Hall, the best friend young manhood and young womanhood have ever known, says—and with his all sufficient plea for noble young womanhood, let us close:

"Puberty for a girl is the floating down a broadening river into the open sea. Landmarks recede, the water deepens and changes in its nature; there are new and strange forms of life; the currents are more complex; and the phenomena of tides make new conditions and new dangers. The bark is frail, liable to be tossed by storms of feeling, at the mercy of wind and wave, and, if without chart and compass, and simple rules of navigation, aimless, drifting in the darkness of ignorance, amidst both rocks and shoals, may make of the weak or unadvised, wrecks or castaways. . . . For four or five days in a month the girl's system will be depleted, and there will be lassitude with peculiar susceptibility to physical or nervous shock. Instead of shame at this function, girls should be taught the greatest reverence for it, and should help it to normality by regularly stepping aside at stated times, for a few years, until it is well established. To beings who looked down upon human life as we do upon the flowers, these would be the most interesting and most beautiful hours of blossom. With more self-knowledge woman will have more self-respect. Savagery reveres this state, and gives to woman mystic awe. . . . The time may come when we shall change the divisions of the year for woman, and allow to her Sabbaths that shall be grouped in fours, four consecutive days per month. And Sabbaths these should remain—days superior to others, devoted to leisure, to other thoughts, to religious sentiments. . . . When woman asserts her physiological rights she will begin here, and will glory in what in an age of ignorance, man made her to consider her shame. . . . Then she will not profane her own Sabbath of biological ordination, but will keep it holy as unto the Lord, for we have hallowed it as a day of blessing from on high."

HEALTH AND STRENGTH

BY

MARGARET WARNER MORLEY.

"Nor love, nor honor, wealth nor pow'r,
Can give the heart a cheerful hour
When health is lost. But timely wise;
With health all taste of pleasure flies."
Gay's Fables, Pt. I, Fable 31.

WHEN his form is sufficiently developed, man, like other mammals, is born. This does not mean that his cells have accomplished their work. Far from it—his cells are as busy as ever. They fasten upon the milk he drinks and form it into themselves; the muscle cells turn it into muscle, the bone cells into bone, the brain cells into brain. Later, when he eats solid food, the cells seize upon that. His blood carries his food in a dissolved state, dissolved by the work of certain cells, all over his body. It flows everywhere, touching every spot; and as it flows past them the cells seize upon whatever they want, to make new tissue or replace that which is worn out.

Thus the body is dependent upon the cells as long as it lives. When the cells cease their work the body is dead. The cells are dependent upon the food they get for the kind of work they can do. At first milk supplies all that is needful; then comes a more varied diet,—vegetables, fruits, grains, and meats being taxed to supply the never-ceasing cry of the cells for food. Nerve cells in the mouth and nose test this food and decide upon its merit.

But these nerve cells are better pleased with some things than others; the nerve of taste rejoices in sugar and certain combinations of flour and butter called pastry, and certain stimulating spices. To a limited extent such food is proper; but because it "tastes good" the ignorant feeder eats it to the exclusion of other foods which are more digestible,—and finally the cells of the stomach, overworked and weak, refuse to dispose of the indigestible stuff. Although warned by the uncomfortable feeling caused by the rebellious cells, the victim sometimes continues to transgress.

What is the result? The cells refuse to do their work; they grow sullen and irritable; and the food in an undigested state is turned out of the stomach. The blood cannot get the materials that it needs from this ill-prepared food, and of course the cells cannot get what they need from the blood. Some of the cells starve to death; others do their best, but the tissue they build is weak and flabby. Others again, not able to build what they wish, take the poor material and build another kind of tissue, which being unnatural, does all sorts of mis-

From "A Song of Life." By Margaret Warner Morley. Copyright by A. C. McClurg & Co., Chicago. By permission.

chief in the body. All of the cells are discontented and sick, and allow the germs of foul diseases to lodge in their midst, if such germs appear and ask admission. The brain cells, being poorly nourished, are irritable, and cause all sorts of suffering in the way of headache and nervousness to the victim. The skin cells do not trouble to build up good skin; but when the old falls off, there is a bare and sore spot underneath.

Everything seems out of order, and the victim of this careless treatment of the cells is told by the doctor that he has dyspepsia; and he thinks dyspepsia is a stomach trouble, when it is really the starvation of the cells all over his body. The cells, like the people they are a part of, form habits. When the stomach cells have formed a habit of not performing the work of digestion, this habit grows upon them; so while the young person may not suffer seriously from a careless habit of eating, he is laying up terrible trouble for future years.

The use of tobacco has a curious effect upon the cells of the body. The nerve cells feel it first. When tobacco is first smoked to excess the cells resent it with all their might. The stomach cells often become violent and force the contents of the stomach out through the mouth, but after a while the cells become demoralized; the overdoses of tobacco deaden them and thus relieve the discomfort at first caused. This is probably the reason they seem to crave it. They want the thing that poisoned them to poison them more, and so deaden their discomfort.

Tobacco is very irritating to some cells, while it is soothing, or deadening, to others; and so, when used to excess, it sometimes causes incurable ulcers in throat and mouth. The cells, finding that they cannot make good mucous membrane in the presence of tobacco poison, make pus cells instead. The senses grow less acute under the influence of tobacco, until those of taste and smell are dull, and the victim can no longer enjoy the odor of the buttercups and daisies when he walks in the fields, and probably comes to prefer the stale tobacco odor which he constantly carries about with him to anything the sweet fields can offer.

The cells of the body are very sympathetic, as we thus see. Ready to do good work if properly treated, they are very apt to unite against oppression if ill-treated; so that harm done to even a few cells will often affect the whole body. Of all the abuses to which the cells are subjected none is more harmful than the habit some people contract of poisoning them with alcohol. At first the alcohol stimulates certain nerve cells, and this causes a feeling of pleasure. But if the alcohol has been taken in excess the pleasurable feeling soon passes, and then the cells are weak and weary. Whenever they are thus over-excited an abnormal action is set up. Like the cells irritated by tobacco, those poisoned by alcohol crave more of the poison to make them forget their discomfort; so the victim is led on by slow but fatal steps until his cells are thoroughly demoralized and will do nothing right. The

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stomach cells refuse to act, the food is not properly digested, and after a time the inside of the stomach becomes covered with sores. The cells that ought to make liver go to making fat instead. In fact, the cells all over the body seem to have lost all moral rectitude, and instead of building up sound tissue, take a drunken delight in converting the alcohol-saturated blood that comes to them into all sorts of abnormal tissue; until finally the victim dies of some terrible disease with which his wine or beer drinking had apparently nothing to do, although it was really at the bottom of the whole trouble.

THE NECESSITY OF GAMES.

BY

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GAMES must be an integral part of every system of physical training. No other form of gymnastics is so recreative in its effects, and none has such lasting power over young and old. Why this is, has been a matter of inquiry for years, and many psychologists have been led to investigate why this form of bodily exercise has such great fascination. In the "Play of Man" Groos expresses the view that by means of play the young of both animals and man develop those physical and mental powers which they need later in life. Games thus serve for the preservation of the individual and of the species. The instinct of self-preservation thus would be the power which excites us to play, therefore an animal which did not play during its youth would be sure to be underdeveloped and lost in the life-struggle.

Stanley Hall opposes this idea. He states that true play never practises movements because they are to be of use later in life. He says that plays and games are the expressions of the motor habits and spirit of the past of the race. They are rehearsals of those bodily and mental activities which in the early life of man were necessary for self-preservation. The work executed in play was necessary to the life of our earliest ancestors. Now, if function makes or modifies growth, that is, if we have our present shapes because our ancestors were forced to do certain things, it will be seen that even many of the apparently aimless games of young children have a deep meaning. According to this view these games exercise some rudimentary function which, although disappearing in later life, must be exercised at this stage of the child's development, in order that certain organs of the child may develop normally. These plays are adapted to their motor needs. It is because they develop the motor capacities, impulses, and forms of our past, says Hall, that plays and games

have such a strong hold upon us. According to this definition all true play, all games that have a chance to survive, must consist of such forms of activity as have their origin in the far past.

Looking at their effects, we see that the first and greatest effect of all forms of bodily exercise of a playful character is a feeling of exhilaration. In games this mental effect is increased, and the cheerfulness developed is undoubtedly caused by our gratifying the basic demands of our nature.

Most games demand good honest, hard work, and we are surprised to see how joyfully this is given. Overcoming difficulties is a genuine pleasure to a player. Games awaken and develop the high moral qualities of courage, determination, and presence of mind. They give energy, decision, and promptness to the will. They teach subordination of self for the benefit of the team. In short, we see that games not only help the physical and mental development of the person, but that they are also of great use in cultivating high civic virtues which are necessary for the life of the community.

It is highly gratifying, therefore, to see that everywhere there is a great awakening as to the importance of games, and that large playgrounds are being looked upon as an essential part of every school. The schoolyard should be the natural playground of the small children of the school district. Other children should be supplied with larger grounds for their games. Next in importance to the ground is its equipment. Much money is often wasted by erecting elaborate structures, which make a great show, but are little used. If there is enough money and space this may do no great harm, but playgrounds for children may be equipped for little money. Where money is not abundant the question "How many children may use this apparatus at the same time?" should govern the selection. The following apparatus is a good equipment for an ordinary school or small municipal playground: two giant-strides, two horizontal ladders, four teeterboards, also two sandpiles, a few small black rubber footballs, and beanbags for the smallest children; then a few basketballs, four poles for vaulting, and a place for jumping. If more apparatus is wanted, add two more giant-strides, two horizontal bars, four tetherballs with eight bats, an iron pipe climbing frame, swinging rings, a few sets of quoits, and iron shots for putting.

The disposition of the apparatus is of great importance. It must be a rule to place all stationary apparatus at the sides of the grounds, so as to leave the largest possible space free for games.

Now comes the choice of games for those who are not exercising on the apparatus. The playground supervisor must see that these suit the mental ability of the child, for the greatest difference in games lies in the varying degree of mental difficulty. He must remember that those games interest children most which develop the basal powers old to the race, i. e., running, throwing, striking, chasing, dodging, etc. He will find many games at his disposal. New ones

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are continually being invented, but only those will interest the child which express some fundamental bodily or mental state and call for natural movements. He must know that a person would rather chase than be chased, would rather strike than run, would rather throw than dodge, but that he would rather dodge than be inactive. A child would rather take an active than a passive part in a game. A game putting a premium on the second activity would, therefore, be fundamentally wrong. To illustrate: Sixteen boys stand in a circle, and four are inside. The boys standing in the circle throw a ball at those inside; if one of these is hit he takes the place of the thrower. Now, a boy would rather throw at some one than dodge, and the result of this game usually is that those inside do not take the greatest pains to dodge. They want to get to the throwing part of the game as soon as possible. This could be made a true game by putting those who are hit out of the game, then there would be the inducement to dodge so as to stay in the game.

There is a natural progression to games which gives to the youngest school children such simple games as cat and mouse; Jacob, where are you? I spy, and the simple racing games over a short distance. In ball games, the tossing and catching of beanbags and the kicking of a light football will meet with most favor.

Children, from seven to twelve years, take delight in chasing and racing games as cat and mouse with two cats, or in several circles, black man, cross tag, black and white, fox out of his hole. Also, in antagonistic games, such as stick wrestling, foot in the ring, rooster fight, etc. In ball games, we find the throwing and catching of a small ball in all its variations, the batting of a ball with a club, the kicking and catching of a football. The games of this age are still individualistic, every one looks out for himself. At about twelve years, games requiring instant decision and great quickness such as three deep, prisoners' base, rabbits, and the like, have their greatest popularity. Then comes the age that chooses games that have a low degree of organization, and which require limited team work, games that have several positions to be filled by the players, as for instance, the simpler forms of baseball. This is also the time for running, jumping, hurdling, vaulting, relay races. Then, as the last group, come the games requiring good team work, such as captainball, basketball, the simpler forms of football, and last, but not best, baseball.

Experience has proved that weak and backward children, that is, those who need play most, usually stand back, and must be encouraged to take part in the games. This shows the need of intelligent supervision of playgrounds so that most good may result.

If the foregoing lines have shown not only the desirability but also the necessity for play, and if they have given to parents and children an idea of how to make games successful, their object has been accomplished.

PHYSICAL TRAINING FOR SCHOOLBOYS.

BY

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I PROPOSE to make a few general observations on what a rather extended experience has shown to be the most useful in the way of organization and equipment for developing the physical nature of schoolboys. While it will, of course, be admitted that the best foundation can be laid in the gymnasium, healthy outdoor sports, properly conducted, should accompany or follow this training. Obviously, however, all training, physical as well as mental, should be adapted, as much as possible, to individual capacity. The first thing to be done, therefore, is to subject each boy to a careful physical examination by experts. On the result of this examination, duly recorded and periodically repeated, proper exercises can be prescribed. A gymnasium of ample size should be provided, but its equipment should be installed, not all at the start on the prescription of an interested manufacturer or an inexperienced physical director, but as a thoroughly accomplished teacher shall have felt his way to his needs in the course of handling the particular school in which he finds himself.

In the selection of this man the greatest wisdom is required. He must be a born leader of boys, a man of irreproachable character and boundless energy. No salary on the pay-roll, except that of the Principal, should be higher than his. To procure the services of any man below this standard is to waste money. The deadliest thing known is lifeless gymnastics.

The gymnasium properly equipped and managed, we turn to the playground. A city school should have at least five acres to every 100 boys, and a boarding school from ten to fifteen acres. These fields should be laid out for the out-of-door games most popular in the school to be provided for. The plans should be drawn only after a careful examination of the best fields of the country. Drainage presents the chief difficulty. No playing-field (including running tracks, jumping pits, and runways) can be regarded as adequate without well-nigh perfect drainage. With correct plans and specifications, and honest contractors, supervised by a skilled engineer, the desired results can be realized—but in no other way.

With proper fields, the organization of the games to be played on them is in order. It is absolutely essential that there be in charge of each of the leading sports of the school, a skilled instructor of the highest character, a man with whom any patron of the school would be willing that his son should associate intimately. Such men are rare, and they come high, but they must be had.

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As regards the eligibility of players, I would say that too much care cannot possibly be exercised in this regard. The aim should be, at least in all competitive games, first, to utilize to the fullest possible extent, the incentive to advancement in studies afforded by rightly managed games; second, to play together boys of substantially the same age and strength; and, third, to legislate against migration from one school to another—that is, for athletic purposes.

To secure these ends, absolutely bar from participation in competitive games: (1) all boys who have completed their 20th year; (2) those who have failed to pass their college or technical school admission examinations; (3) those who have not completed a full year of attendance at their school; (4) those whose class has graduated, whether they themselves failed or not. Foul play and roughness arise from the following causes: (1) the way the teams are made up, hence the eligibility rules just proposed; (2) the way they are handled before the games, hence coaches of the highest character and skill; (3) the way they are handled during the games, hence officers of skill, integrity, and backbone.

While these regulations and precautions apply with greatest force to football, baseball, basketball, and hockey, they also apply, though with less force, to track sports and cricket. Boys ineligible by this code, however, should be allowed to play in practice games, or games played (alas! all too infrequently in these days) for pure sport. Had such a code of rules as that suggested been in force in the schools of the country, during the past two or three years, most of the objections advanced against certain sports would never have been made. The moment sports are brought into the position that they should occupy in an educational institution, and the temptation to import athletes is removed, the whole complexion of the situation is changed.

THE BODILY BASIS OF EDUCATION.

BY

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PHYSICAL education is a term which only in comparatively recent years has come to have a definite meaning. The work of the specialist in physical education is in part to prescribe exercises (corrective gymnastics) applicable to certain disorders and malformations, as spinal curvature; but it is his work chiefly to secure, through appropriate muscular exercises, the highest general bodily efficiency and vigor of the individual. Time was when the services of such a specialist were not generally needed, and when

From "The Chatauquan." Copyright. By permission.

they could not have been secured if they had been needed. When children generally ran wild in the country—in the woods, along the streams, across the fields—and when parents led lives of manifold bodily activities, on the farm, or in the shop, with plenty of air, and exercise, and change, there was little need of what Herbert Spencer has called the “factitious exercise” of the gymnasium. A man who swung an axe all day had little use for Indian clubs. But the life of to-day differs from that of a generation ago in being largely urbanized, and largely specialized. Urbanization, generally speaking, tends to deprive of air and space, to force people to ride instead of to walk, to cramp the chest, curve the back, “wing” the shoulder-blades, dwarf the legs, and protrude the abdomen. Specialization tends to cultivate a narrow set of muscles or powers, and at the expense of “general somatic life.” Both tend to overwork the nerves and underwork the muscles. To these conditions is to be added the fact that children to-day spend a longer time than formerly under the physically cramping and devitalizing influences of schools. For both urbanization and specialization the specific remedy is afforded by the specialist in physical education. As an integral part of the school he undertakes to provide the exercise which the conditions of life do not afford, to counteract the ills incident to indoor and sedentary occupations, to fortify the body in childhood and youth so that it can stand the strain of later life.

Any one who will glance through such an admirable book as that recently written by Dr. Luther H. Gulick on “Physical Education by Muscular Exercise” (Blakiston, Philadelphia) will readily see that the task of the teacher of physical training is a most delicate one. He must adapt the exercises to individual needs; must realize that he is dealing not merely with muscles but also with nerves and with minds, with a psycho-neuro-muscular organism. Pupils whose nervous force is already low should not be required to give swift response to quick commands, or be subjected to the strain of competition or excitement. On the other hand, pupils whose neuro-muscular force is greater than their mental control, may be trained in attention, imagination, thought, and will, by performing exercises at command; for “we think in terms of muscular action”; “the muscular system is the organ of the will.”

The aim of the specialist in physical education in American schools seems to be a combination of two strongly contrasting systems: gymnastics and athletics. The old-time German gymnast (described by Dr. Gulick) has powerful shoulders; the individual fibres of the muscles stand out prominently; he has a powerful grip. The muscles upon his chest and shoulder-blades are prominent. His chest appears large; but this may be due rather to excessive muscle than to the position of the ribs; the thorax is rather flat from repeated severe exertion of the abdominal muscles. The muscles of the legs are vigorous, but are light in proportion to the development of the

shoulders and arms. He can do almost anything on the apparatus when suspended by his arms, but he cannot run for long distances, and is not graceful as a walker or jumper. He is apt to be "muscle-bound," and is often the slave of his own condition—his muscular establishment being an expensive one to maintain.

The pure athlete, on the other hand, of which the English school-boy is a type, works less for abstract indoor muscle-building, and more for concrete sports and games. "His characteristic games and sports, and exercises, are running, jumping, throwing, wrestling, boxing, cricket, football, lawn tennis, hunting, fishing, horseback-riding, rowing, mountain-climbing, and so on. These exercises furnish conditions more similar to those under which the body was developed in evolutionary times than do the more or less artificial exercises of the gymnasium. Each part of the body is exercised in accordance with the way in which it is developed; the heavy work is done by the legs, work demanding speed and agility is done by the arms; the arms do not support the weight of the body for long periods as they often do in systems of gymnastics. He is fairly strong, is erect and graceful. He is a fleet runner, and has splendid endurance. He rides horseback; can spar and wrestle. He has played his game of football, and has rowed in one of the many crews in his university. He is quick, hardy, can take care of himself in an emergency; is used to handling himself in a crowd. He cannot do any particular gymnastic feats with skill, nor is he interested in them. During later life he will drop his active participation in most of the more strenuous sports; but he will ride, play golf, swim, row, and will always maintain a keen interest in these things."

The aim of physical education in America is to produce neither gymnasts nor athletes, but a happy combination of both—to build a body whose "different parts are so related to one another as to produce a whole in which each part is exactly adapted to perfect coöperation with every other part." The means employed to this end naturally combine some features of both systems; but the emphasis is increasingly laid, even among the schoolboys and girls, on athletics; and properly so. Athletics calls for and includes gymnastics, but gymnastics does not necessarily issue in athletics. It is proper to regard the body as a means; it is not proper to regard it as an end in itself. It is interesting to note that this change of emphasis in physical training is in line with similar changes in other school subjects, in manual training, in drawing, and in literature. The abstract and the subjective have in every case given way to the concrete, the objective, and the practical.

MISTAKES, MISAPPREHENSIONS, AND FALLACIES, CONCERNING MANUAL TRAINING.

BY

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NOTE.—Not the least important part of Physical Education is the work of Manual Training, and we are glad to have the opportunity of presenting the following refutation of the mistakes, misapprehensions, and fallacies concerning it from the pen of so able and competent an authority as Dr. Calvin M. Woodward. It should not be forgotten that Manual Training is a physical exercise which combines, as no sport or pastime can do, the elements of intellectual interest and muscular development.—a combination which, it will be observed, nearly all the authorities contributing to this volume claim to be the highest desideratum in Physical Culture.—[C. W.]

A MOTHER recently said to a friend who had advised her to send her son to the Manual Training School: "Yes, if I wish my boy to seek the companionship of carpenters and blacksmiths, I suppose I ought to follow your advice. But I hope and expect my son to become a cultivated man, and to seek the companionship of cultivated men."

Similarly, an educational writer prophesied when the Manual Training High School of Philadelphia was opened, that its "graduates would probably form a degraded mass of operatives."

In like manner many people have taken it for granted that no one who had brains or ambition enough to do something else, would concern himself with the arts of a mechanic; hence, if they see a boy in a shop with tools in his hands, the inference is natural that he is either dull or low-minded.

I am not surprised at such mistaken ideas and inferences, for all the literature and philosophy of the ages has taught the same thing. Plato and Aristotle taught that contact with the practical arts was degrading, and that tool work of all kinds belonged to slaves.

This prejudice, ancient and modern, was founded on ignorance and caste. To-day the wall of prejudice whether founded on ignorance, or built by artificial caste distinctions, is being torn down and removed. Skill and culture go hand in hand, and there is no divorce between science and arts. Let me speak of the more common fallacies and mistakes of both parents and teachers in regard to Manual Training.

1. Manual Training is not the same thing as manual labor. If a boy works in a shop or on a farm, it is assumed that he gets manual training—he may have a taste of manual training, sometimes he has considerable, but generally he gets very little. I was a farmer's boy, and worked on a large Massachusetts farm till I went to college. I learned to plough, to chop wood, to hoe, to mow, to use a shovel and a

fork. I could yoke oxen, harness horses, and milk cows, but the scythe and axe were the only edged tools I could use, and I did not learn to use properly either bench or machine tools upon woods and metals. So a boy in a shop learns a few motions, perhaps a few tools, but nine-tenths of his time—perhaps more than that—is given to mere labor, to doing things he knows how to do, and which yield, not education, but wages. No farmer's boy learns how to draw—neither does the shop laborer learn the relation that drafting bears to construction. Manual labor means hard work, with the large muscles, for eight or ten hours per day, while the mind is absent or dormant. So long as the work in hand is interesting, and one is trying to master it, there is education and a measure of mental growth; but when sharp attention ceases, education stops, and only manual labor continues. I am reminded of a remark made to me recently by a gentleman in middle life, a very excellent carpenter, when I was watching my boys, twenty-four of them, at work making their first weld in the forging shop. He seemed intensely interested as he watched the young students at their work. I said: "You seem to like to see the boys work. Do you understand what they are doing?"

"Yes," said he; "I worked a year once in a blacksmith shop."

"Well," said I, "then I suppose this operation of welding is a very simple matter to you."

"Not at all," said he. "I never made a weld in my life. I never got a chance; I worked hard at all sorts of labor. I kindled the fire, pumped the bellows, and I did some 'striking' for other men, but they never let me try to make a weld." Then he added, with a good deal of feeling, "These boys learn more in one week about the really essential art of forging than I learned in half a year. And the secret of it is, they have a thoroughly skilled workman who is competent to teach and to use practically every principle involved, and who does nothing but teach; and he gives every boy a chance to actually learn every step in the business, and they spend no time in just doing things they know how to do fairly well."

2. It is assumed that in learning how to use tools, one must immediately make something—a toy, a piece of furniture, or a machine. The assumption is unscientific. One does not begin arithmetic with bank discount, or mensuration. The *fundamental rules* must first be mastered. The soldier learns how to use his rifle without once shooting at an enemy. The piano pupil learns scales, intervals, and fingering, before once venturing upon Beethoven or Rubenstein. So a manual training pupil learns the simple alphabetical steps of every tool, and the elements of every process before he attempts to combine them. A synthesis may follow a mastery of the analytical steps involved in a construction, but it comes at the end, not at the beginning, of the lesson series.

Much less is a pupil at the beginning prepared to select his tools, or to choose or design his exercise. The Latin pupil might as well

select his author or write his own grammar. The manual arts should be taught logically, and learned systematically.

3. It is a mistake to suppose that every boy can learn how to use tools correctly by himself without a teacher, and that he must not be "shown." Modern tools are the product of many generations of careful study on the part of skilful men. The more elaborate the tool, the more brains have been mixed with it. There is one best way with every tool and every step in its use, and the chances are a thousand to one that the boy when left to himself will not find that best way. As well let him guess at the meaning of words without a dictionary; or learn by himself how to hold his knife and fork; or how to manage an automobile.

Self-taught people—while better than untaught people as a rule—often suffer keenly from wrong habits, and they are always handicapped as compared with the pupils of a good teacher. We all know how much it means in art, in literature, and in science, to be under the careful personal direction of a master. It is equally valuable to the pupil in manual training. The theory of every tool, and its correct use, and the analysis of every process should be shown, and made perfectly clear by a master mechanic and a skilful teacher.

4. It is a mistake to suppose that the most valuable thing in manual training is its availability as an introduction to the fine arts. Undoubtedly, it is of service in leading to art study, as an abundant experience has shown, but I think its economic or industrial value is far greater. Manual training directly opens the way to industrial efficiency and to technical colleges. While it unfits no one for any occupation, it clearly leads up on the one hand to the doors of industrial establishments; on the other hand, it leads straight into our technical schools.

Some of our graduates are artists, quite a number are architects, but far more are engineers and manufacturers. Of course, many begin as mechanics, but they soon rise to positions where they direct other mechanics or draftsmen.

5. I regret to say that some people think, or fear, that manual training lowers the moral and intellectual tone of a school; that where manual training goes in something fine and refining must go out. That is a sad mistake. No school was ever on a higher moral plane than a good manual training school, and I doubt if any was more strenuously intellectual. The manual training boy learns to insist upon accuracy, precision, fitness, strength—in other words, concrete truthfulness. Again he puts theories to actual test; he challenges authority—and demands a trial. He asks the what, and how, and wherefore; and wants the latest reports in science, and the last invention in the arts. Psychologists tell us that manual training is essential to the full development of the brain, and therefore indispensable to intellectual culture.

6. Finally, it is a mistake to suppose that success in the shops of

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a manual training school does not consist with success in academic studies; and that a dunce in mathematics and grammar must be good in the shop. The best all-round scholar is always a good workman; and the good all-round workman is always a good scholar. But not every boy is capable of high scholarship, and on the other hand, not every boy has capacity for mechanical skill. This, however, is true: every boy with a healthy normal brain has capacity for good scholarship and for good workmanship. There are dunces in all departments, but real dunces, like loafers and shirks, have a hard time in a manual training school, and their sojourn therein is not long. It takes brains to make and read a good figured drawing; and it takes a clear head and a high degree of intelligence to use and not abuse a Universal milling machine.

Doubtless there are other incorrect and inadequate conceptions of manual training which only an actual trial of it under good conditions can remedy. The manual features occupy less than one-third of the time devoted to study, recitation, and laboratory work. Science, mathematics, and language work still occupy the chief parts of the daily programme. The all-round effect of the combination is fine. Professor William James of Harvard University says: "The most colossal improvement which recent years have seen in secondary education lies in the introduction of manual training." And Dr. Stanley Hall says: "No kind of education so demonstrably develops brain as hand training."

THE IMPORTANCE OF ELEMENTARY INSTRUCTION IN PHYSIOLOGY.

BY

PROF. T. H. HUXLEY.

THE chief ground upon which I venture to recommend that the teaching of elementary physiology should form an essential part of an organized course of instruction in matters pertaining to domestic economy, is, that a knowledge of even the elements of this subject supplies those conceptions of the constitution, and mode of action of the living body, and of the nature of health and disease, which prepare the mind to receive instruction from sanitary science.

It is, I think, eminently desirable that the hygienist and the physician should find something in the public mind to which they can appeal; some little stock of universally acknowledged truths, which may serve as a foundation for their warnings, and predispose towards an intelligent obedience to their recommendations.

Listening to ordinary talk about health, disease, and death, one is often led to entertain a doubt whether the speakers believe that the

course of natural causation runs as smoothly in the human body as elsewhere. Indications are too often obvious of a strong, though perhaps an unavowed and half unconscious, under-current of opinion that the phenomena of life are not only widely different, in their superficial characters and in their practical importance, from other natural events, but that they do not follow in that definite order which characterizes the succession of all other occurrences, and the statement of which we call a law of nature.

Hence, I think, arises the want of heartiness of belief in the value of knowledge respecting the laws of health and disease, and of the foresight and care to which knowledge is the essential preliminary, which is so often noticeable; and a corresponding laxity and carelessness in practice, the results of which are too frequently lamentable. . . .

I am not sure that the feeling, of which the doctrine to which I have referred is the full expression, does not lie at the bottom of the minds of a great many people who yet would vigorously object to give a verbal assent to the doctrine itself. However this may be, the main point is that sufficient knowledge has now been acquired of vital phenomena, to justify the assertion, that the notion, that there is anything exceptional about these phenomena, receives not a particle of support from any known fact. On the contrary, there is a vast and an increasing mass of evidence that birth and death, health and disease, are as much parts of the ordinary stream of events as the rising and setting of the sun, or the changes of the moon; and that the living body is a mechanism, the proper working of which we term health; its disturbance, disease; its stoppage, death. The activity of this mechanism is dependent upon many and complicated conditions, some of which are hopelessly beyond our control, while others are readily accessible, and are capable of being indefinitely modified by our own actions. The business of the hygienist and of the physician is to know the range of these modifiable conditions, and how to influence them towards the maintenance of health and the prolongation of life; the business of the general public is to give an intelligent assent, and a ready obedience, based upon that assent, to the rules laid down for their guidance by such experts. But an intelligent assent is an assent based upon knowledge, and the knowledge which is here in question means an acquaintance with the elements of physiology.

It is not difficult to acquire such knowledge. What is true, to a certain extent, of all physical sciences, is eminently characteristic of physiology—the difficulty of the subject begins beyond the stage of elementary knowledge, and increases with every stage of progress. While the most highly trained and the best furnished intellect may find all its resources insufficient, when it strives to reach the heights and penetrate into the depths of the problems of physiology, the elementary and fundamental truths can be made clear to a child.

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No one can have any difficulty in comprehending the mechanism of circulation or respiration; or the general mode of operation of the organ of vision; though the unravelling of all the minutiae of these processes, may, for the present, baffle the conjoined attacks of the most accomplished physicists, chemists, and mathematicians. To know the anatomy of the human body, with even an approximation to thoroughness, is the work of a life; but as much as is needed for a sound comprehension of elementary physiological truths, may be learned in a week.

A knowledge of the elements of physiology is not only easy of acquirement, but it may be made a real and practical acquaintance with the facts, as far as it goes. The subject of study is always at hand, in one's self. The principal constituents of the skeleton, and the changes of form of contracting muscles, may be felt through one's own skin. The beating of one's heart, and its connection with the pulse, may be noted; the influence of the valves of one's own veins may be shown; the movements of respiration may be observed; while the wonderful phenomena of sensation afford an endless field for curious and interesting self-study. The prick of a needle will yield, in a drop of one's own blood, material for microscopic observation of phenomena which lie at the foundation of all biological conceptions; and a cold, with its concomitant coughing and sneezing, may prove the sweet uses of adversity by helping one to a clear conception of what is meant by "reflex action."

Of course, there is a limit to this physiological self-examination. But there is so close a solidarity between ourselves and our poor relations of the animal world, that our inaccessible inward parts may be supplemented by theirs. A comparative anatomist knows that a sheep's heart and lungs, or eye, must not be confounded with those of a man; but, so far as the comprehension of the elementary facts of the physiology of circulation, of respiration, and of vision goes, the one furnishes the needful anatomical data as well as the other.

Thus, it is quite possible to give instruction in elementary physiology in such a manner as, not only to confer knowledge, which, for the reason I have mentioned, is useful in itself; but to serve the purposes of training in accurate observation, and in the methods of reasoning of physical science. But that is an advantage which I mention only incidentally, as the present conference does not deal with education in the ordinary sense of the word.

It will not be suspected that I wish to make physiologists of all the world. It would be as reasonable to accuse an advocate of the "three R's" of a desire to make an orator, an author, and a mathematician of everybody. A stumbling reader, a pot-hook writer, and an arithmetician who has not got beyond the rule of three, is not a person of brilliant acquirements; but the difference between such a member of society and one who can neither read, write, nor cipher is

almost inexpressible; and no one nowadays doubts the value of instruction, even if it goes no further.

The saying that a little knowledge is a dangerous thing is, to my mind, a very dangerous adage. If knowledge is real and genuine, I do not believe that it is other than a very valuable possession, however infinitesimal its quantity may be. Indeed, if a little knowledge is dangerous, where is the man who has so much as to be out of danger?

If William Harvey's life-long labors had revealed to him a tenth part of that which may be made sound and real knowledge to our boys and girls, he would not only have been what he was, the greatest physiologist of his age, but he would have loomed upon the seventeenth century, as a sort of intellectual portent. Our "little knowledge" would have been to him a great, astounding, unlooked-for vision of scientific truth.

I really can see no harm which can come of giving our children a little knowledge of physiology. But then, as I have said, the instruction must be real, based upon observation, eked out by good explanatory diagrams and models, and conveyed by a teacher whose own knowledge has been acquired by a study of the facts; and not the mere catechismal parrot-work which too often usurps the place of elementary teaching.

PHYSICAL TRAINING AND ATHLETICS IN THE SCHOOLS.

BY

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NO indoor training is to assume to take the place of open-air play in the elementary schools. Calisthenics are unobjectionable, but with little people they are no substitute for natural play. Playgrounds may cost more, but they are worth more. No matter what they cost, it is the public business and function to provide them. Happy is the town which does it early, when it may do it well.

If the buildings are hygienically pure, if there is sufficient air space and sunlight, if the mechanical appliances and the possibility of their refusing to work are kept at a minimum, if the grounds are ample and dry, and if teachers are sane about the relations of work and of freedom in children, there need be no fear for physical training in the elementary schools.

This is not saying that special teachers, who will quickly see the special needs of multitudes of children in the city schools and who

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will aid the class teachers to see the need of artificial exercise, which must often be substituted for real work or natural play, are not desirable in large systems of schools. I think they are; but the special circumstances ought to govern.

It is not necessary to discuss the advantages or disadvantages of different systems of physical exercise. All have advantages and are practically beyond criticism. Adaptation to conditions is the paramount and not very serious question. Enthusiasts will not agree with me; it is their mission in life to stand up for their own, and they generally do it well. If we let them do that and give them their chance, they ought to be content without expecting that we will let any "system" own the schools.

Passing from the elementary up to the secondary schools, we come upon different situations, both as to the schools and the pupils. The schools are likely to be almost exclusively in congested districts. The pupils have gotten over the kind of play that is best for them. They have become more constrained and a trifle more conventional. They resent leading strings—and they know a lot that is not so. They are at a critical stage in the bodily development. They do need less care, but a little more guidance, sympathetically and unostentatiously given. If the population is not dense, there is little trouble, for they get about all the help they require in this connection in their ordinary work and natural play, but at the centres of the cities it is hardly so. There a gymnasium is well, and often practicable. There is no doubt whatever of the advantage of regular work in a gymnasium, both for young men and young women. If they do not commence it at the high school age, they are not likely to do so at all.

Whether the public high school should supply this desirable addition to the opportunities of youth is not so much a question of educational necessity as of neighborhood feeling and expediency. Often there is no local need for one, and no local appreciation of the uses of one. Often, private enterprise or associated enthusiasm, like the Christian associations, the Turner societies, or the athletic clubs, provide them. While the high schools are not bound to provide them, still, if the deliberate sentiment of their constituencies will sustain them in doing so, it may be done without invading any sound principle of the educational system. The difficulty is that when one school does it, the others think they must, in order to be up to the times, and they undertake it upon a basis which cannot succeed. A gymnasium is worthless unless thoroughly equipped and made inviting, and unless managed by specialists who are themselves not only able to use the apparatus in attractive ways, but are also sympathetic and inspiring teachers. Gymnasium work will be without result unless very regular and very persistent. *With* all these it will be with splendid result. Without a ready and popular support, and a clear understanding of all the conditions which alone can assure results worth the while, it

is safe to say that the establishment of a gymnasium in a secondary school is a move not to be encouraged. It must at all times be had in mind that so long as pupils live at home, there are some things concerning them which may well be left to the homes to see to.

When we come to the colleges and universities the conditions are again different. The students are away from home, with all that implies. Much closer mental application is exacted. The need of regular exercise is much ignored. Youngsters dare fate senselessly when they are free to do so, and in college they are likely to come into a larger freedom for the first time. The need of a complete gymnasium with ample instruction, and required attendance at least in the freshman, or the freshman and sophomore years, is manifest enough. Here gymnasiums are both necessary and practicable. Ready and sensible medical supervision of all the students and all the affairs of the institution is also very desirable.

The physical training of a whole body of students evenly is better than the training of a few elaborately. But inevitably some will excel, and such will have special ambitions, and they will gain special attention. Good rivalries will ensue, not only between individuals in the same institution, but between experts in different institutions. Then of course there will be the utmost effort and the most exact and complete preparation.

I am not now referring to sports, or games, or to "teamwork" at all, but to the strength, endurance, and skill of the individual man, and to competitions where they are put to their highest tests. They are wholesome and quickening in every way—nothing short of a spur to the schoolboys, and an inspiration to the educated manhood of the country. If the notable contests are narrowed down to a few men in any one year, the opportunities are open to all, and very large numbers get the uplift which goes with them. The conditions of the competition are well settled, the management is exact, and the opportunities for frauds are very slight, and the temptations hardly perceptible. The boys manage these contests themselves, and beyond all doubt they manage them upon a plane so high that it ennobles the managers, pleases the contestants, and satisfies all. The uncertainties do not invite betting. The disappointments are not deep. All honor the victor, and none more than his closest competitors, for none know the cost of the triumph so well as they. If the achievement is noteworthy, it is at once known in every part of the country. There is not a college boy worth to the country the salt which he eats who does not know that in 17 of 19 recognized athletic events the world's record is held in this country. Most boys of that kind can tell you that in April last, Rose, of the University of Michigan, put the 16-pound shot 48 feet, 7 1-5 inches, and that on the same day Dole, of Stanford University, cleared the bar in the pole vault at 12 feet, 1 1/8 inches, and that no one in the world had ever done so much before. They can tell you that in the eighth, quarter, half, mile, and

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2-mile runs, and in all the jumps save one, American boys have beaten all the other boys in the world. It makes some of us sedate ones dizzy, if it also makes us proud, when one American boy stands still and then jumps 11 feet, 4 7-8 inches, and another stands still and then clears a bar at 5 feet, 5 inches from the floor, under regulations, and before the crowd, with nothing but strength, skill, and courage to help them,—when we know that no one ever did the like before.

The English say that we strive especially for the records rather than gain them from normal work; that we concentrate supreme effort in a few, rather than get the benefits of the work for all; and that we almost lose the point of physical training altogether. They must say something, and it must be admitted that there is something in what they say. But our way is the American way and theirs the English way, and we are both getting on very well—and we are all mighty glad that we are getting on so well together. We are each likely to tell the other much that it is very desirable to know.

The intense application, and the long and exact special training incident to these sharp contests, seem to require caution against “over-training” or the development of some part or function of the body at the expense of some other. There is danger enough of this to claim educated and experienced oversight. Aside from the possibility of this, there seems to be nothing hurtful to the participants or demoralizing to the student body from this high grade physical work or from the ensuing contests.

The distinction between physical training and “athletics” seems to lie between indoor and outdoor work; between what institutions do for students and what students do for themselves; between work performed to keep health and promote strength, and sport for the excitement and fun that are in it; and between the work of an individual and that of a “team.”

By the way, a good part of the people in New England hardly seem to know what a *team* is. Probably the ones who think that a horse and wagon make a team will hold that a boy and a bat make a baseball team, or a boy and a shin guard make a football team. But those of us who agree that it takes at least two horses to make a horse team will understand that it takes at least nine boys, with all appliances, to make a baseball team, and eleven boys, with astonishing equipments, to make a football team, and we are not surprised that it takes from fifteen to twenty boys to make a first-class baseball “nine,” and all the way from twenty to forty to make a formidable football “eleven.” But whether it be two, or whether it be forty, the “nine” or the “eleven” pulling together make a “team.”

Any criticism brought against physical work in the schools is stirred by these team contests. No matter how many it takes to make a team, it takes thousands and more to make a game. The crowds of fervid partisans on either side; the banners and streamers, and songs, and

horns, and calls, and yells, and yell-captains; the officials, and coaches, and trainers, and doctors, and rubbers, and bottle bearers, and scrubs, and athletic statesmen, must all supplement the teams which struggle for the mastery and for the prestige of their universities, in order to have a game. There are some who dislike all this. If you are out for fun, it is quite as well to have it. The men who know little about it are able to find enough to criticise. Old men, who never thumped one another when boys, are apt to be against it. Boys who do embroidery work while their mothers read poetry to them, men who want a fire engine or a lifeboat to slow down for fear something might break—without seeing that something *must* break if it does slow down, and men who hug the constitutional negatives after the council is over and the bugles have sounded the advance which must enforce the constitutional commands, or save the Constitution itself, are hardly likely to be in love with games which turn upon strength, force, nerve, sense, and skill.

But the American crowd likes them. Training has to be sustained, perhaps required. The strenuous games attract the multitude, perhaps in a measure which has some perils in it. The fact that the crowd likes them is not against them. That people do *go* is no reason why they should not be allowed to go. The common feelings are not necessarily all wrong. The crucifixion of the flesh, the breaking of the spirit, have no part in modern ethics, and no share in twentieth century teaching. The fair questions are—Are these great games fraught with unpreventable evils, which outweigh any good they may have? Are they on the whole good, or bad, for the youth of the country? And, what ought to be the attitude of the school concerning them?

We would meet these questions squarely. To do that we must face the exact criticism, and focus the discussion. Baseball is a natural college game. It is open, and all may see all that occurs. It is not so technical that people who follow ordinary pursuits cannot understand it. It is relatively free from dangers, and while it attracts the throng, it is not encompassed by many temptations. It comes in the spring, when there must naturally have been almost a year of residence in college. Rowing has many good features, and not many bad ones. It seems to encourage gambling in some measure, but otherwise is mostly beyond criticism. Tennis is ideal, but many young men want heavier work. Golf is hardly a college game; it has been said that it is a state of the social mind. The game which holds the centre of the stage in the fall, and draws all the criticism, is football. It has more ins with more outs than any other college game invented. The troubles with it are not in the high schools, unless it is in the influence of the college game upon them. If there is trouble, it is in the college game itself, in the consequences to college boys, and the general bearing of the game upon the thought and feeling of the country.

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Let us put the criticism as pointedly as we may. This is what "they say."

1. That the game is dangerous and exhausting.
2. That the 'varsity teams do not represent the bodies for which they stand.
3. That the game makes heroes of men who have no right to the commendation of a democracy of learning.
4. That men who give the time and energy required in successful football, cannot maintain positions as good students.
5. That the coaching system is vicious, training men to evade the rules when that will aid success.
6. That the greater part of the game cannot be seen by spectators, and that this aids the evasion of the rules, and worse; that it encourages real battle rather than open manliness and a chivalrous spirit on the part of the players.
7. That it induces connivance on the part of students and graduates, on the part of the sporting element in the community in larger measure, and on the part of college authorities in some measure, to get men who can play a strong game by paying them for it in one way or another, and without reference to their standing in college, or their right to admission at all.
8. That it is too expensive for sport, and gathers more money than ought to be under the control of students, and that the game turns on factors which money brings into it, and therefore that it does not afford a fair basis for intercollegiate contests.
9. That it breeds a good deal of loafing, gaming, and drinking, and does not make for educational effectiveness and sound living.
10. That success is such a factor in college prestige and university preëminence, that the popularity of the game is so general, the pleasures of university triumphs so delightful, the meaning to youngsters who are yet to go to college so significant, that the authorities fall short in courage to deal with the evils of it, and that these are degrading to the student life of the whole country.

Now, I feel assured that none will have the hardihood to deny that this list is sufficiently comprehensive, or that it is lacking in the effort to give point to criticism.

Some will deny the facts or the reasonableness of the objections, but the facts are not overstated, nor is much of this criticism without reason. It may well be surmised that the game cannot endure as a college sport unless such serious evils as common knowledge associates with it are admitted and corrected. If that is done, it must be by the men who manage or are responsible for it.

The youngsters and some of the "oldsters," who know all about it, won't tell as frankly as my friend Governor Black tells about the baseball team at his summer home in New Hampshire. He says they can never entertain any doubt about results. They make sure that among the neighbors' boys, or the invited guests, there is a pitcher

from Harvard, a catcher from Dartmouth, a shortstop from Columbia, and a first baseman from Yale, etc., and then, if there is any residuum of uncertainty, they send over the mountains and hire professionals enough to guard against the possibility of any unseemly slip. That will do for a summer frolic, or for an after-dinner speech in mitigation of a New York statesman's working himself to death over a farm in New Hampshire in vacation time, but it will hardly do for the regular order of intercollegiate contests in term time. Yet there are coaches and graduates, and athletic politicians, who could tell about as strong a story about college football, and tell the truth—if they would.

As I have been reflecting upon this address, I have been bringing together the evidences which have reached the public of unmistakable fraud in getting and keeping men in the teams who are in college for nothing else. These evidences cannot be presented here, but they may be indicated. One of the leading universities in the country is called upon to defend itself against the charge, brought upon it through the course of its athletic managers, that it has in its team a bruiser who has made the round of three or four universities to play in this game; another that it has a player who is a professional pugilist; and a third that its football team is largely sustained through political and other jobs which thinly disguise bribe money given to the players in order to keep them in the university. That the atmosphere of the game as now managed predisposes to gaming can hardly be doubted by any one with his eyes open. But with me it is not wholly a matter of inference. I have sat in a hotel lobby before a great game, and seen scores of boys from two leading American universities daring each other to put up money on their respective teams, and when the dare was accepted, and the terms settled, as frequently happened, they placed their money in envelopes, which they gave to the clerk of the house, to be delivered to the winner after the game. The thing could hardly have been worse, and it surely would not have been more bald at a racing centre, and with professional sports.

The advantages of the game are unmistakable. It makes for pluck, nerve, endurance, self-control, and alertness in emergencies. Fair students, who are successful football players, are not only among the very best men in college, but their promise of marked success in life is exceptionally high. The game brings to many boys their first real ambition to do something better than others can do it. It smells of the ground, and that is healthful—physically and mentally healthful. Its influence upon the thought and life of the players is quickening and steadying. It makes for generalship and for organized effectiveness. I have no doubt about American football having had something to do with the new method of fighting, and the new measure of energy and resourcefulness shown by American boys at El Caney and San Juan, at Manila and Santiago. Moreover, it is exhilarating, and invigorating, and it binds men together and develops class feeling and

college spirit through splendid coöperative effort. It brings colleges to the fore in the thought of the masses. And it takes the conceit out of boys, and in many ways makes for genuineness in living. On the whole, it goes as far as anything else in the universities to make their thought square with the affairs of life, and lead educated men to the places of the most decisive consequence in the concerns of a great people.

It is all this which makes the game so well worth fighting for. But in the end it must be said that if these things are to be gained at the expense of fifteen lives, and many hundred serious injuries in a season, or, worse yet, at the cost of a widening spirit of lawlessness, the cost is too great, and all these advantages will have to be foregone or gained in some other way.

All true and pure sport capable of use for college contests must be fought for. The better the sport the truer this is. As it becomes exhilarating and popular, the larger and meaner are the barnacles which fasten upon it. But the more quickening the struggle and the more uplifting the spectacle, the more it is worth contending for. To the young men and women who are in our universities, who know not much of physical effort, and practically nothing of physical danger, there is more legitimate leaven which makes for lives that can do things, in the rush and struggle, the strategic assault and defence of a 'varsity football team on a fall afternoon than is brewed in a good percentage of the college classrooms of the world in a semester. Then the game is worth purging and saving. Of course, there are enough who think the game will last without cleansing. If it should, it would distinctly lower the educational and æsthetic plane of American colleges, and when that is ascertained, something decisive will be done. Would it not be better to do it now?

The evils may be put out of it by authority. Students may be expected to go as far in their excitements as the authorities who are charged with the duty of regulating their strenuousness and enthusiasm will allow. They will have no difficulty in finding excuse for excesses which faculties live to see—and refuse to see. And with boys who have the stuff in them the outlook is clear or cloudy, and moral fibre becomes firm or flabby as those to whom they look for commendation, or remonstrance, or punishment give, or fail to give, them about what is their due.

Until all possibility of it disappears, the moral sense of America should rebel against any view of college government which leaves college boys to go to the bad without much hindrance. The theory that all a professor has to do is to be intellectually, or even *unmorally* scientific, may have to go in some countries, but it should never be accepted here. Fathers and mothers who give their sons and daughters over to any such intellectual leadership as that deserve the distress which unrealized hopes are likely to inflict upon them. It is not a question of college freedom. Freedom is not license any-

where. Freedom is stainless. There is no such thing as freedom to do wrong, in college any more than in the state. I am not unmindful that the point of sport and of college contests is lost if college faculties manage them. Endow American sport, or American college athletics, and you doubtless expel the soul and spirit from them. But students must distinctly know that their management must keep in step with good morals, and in key with all the beneficent ends for which colleges and universities exist. More than the point of sport is lost if this is not so.

If in any case students run amuck, or get to running the faculty amuck, the board would well install a new faculty, and if they should be too much for faculty and board together, parents would well withdraw their sons, benefactors would well withhold their gifts, affections would be well placed somewhere else, and what is left would well go down into the depths together. The right to have free contests and exhilarating sports, and the right to gain the benefit of managing these for themselves, is not to be confounded with the right to carry the college into unseemly places, or to gamble under the name and colors, and lights of a university. Boys are to have freedom to manage college sports only when they realize that they are managing for all, and when they manage in ways that hold out welcome to every honest man, and bring no blush to any fair and modest cheek.

But let it be repeated that where the wrongs come in, it is less likely that they spring from student inclinations than from official inefficiency. Students sustain a government which governs. All they want to know is that it is strong enough to govern, and that it is sane and sympathetic enough to govern well.

Whether or not tariffs are to be regulated by their friends, it is mighty true that boys are. No man is much of a friend of boys who has forgotten about being a boy, who cannot see things from the outlook of the boy, or who cannot sympathize with the activities in which every real boy must engage.

If I were a university president, I would not only have part in the athletics because I liked to, but I would use the sports to make management easy. I would go to the hurrah meetings as often as the crowd would welcome me, and I am confident they would welcome me as often as I was genuine about it. I would go down into the gymnasium pretty often, and before I started I would take off my shell and leave it in the sanctum. When the university lined up for an issue, I would be with it. I would pay my dollar, and get into the crowd, and yell for the flag, and if we won I would embrace a freshman quite as quickly as the professor of philosophy—who might be shocked by it. I would earn the right to have my word welcome at the athletic end of the establishment. I would not put it in very often. I would never impose it upon a boy management that was square, and decent, and right. But I would hold the right against the time when it was needed to bar out the vicious and temper the

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excesses: against the time when it would bind all the parts together, and keep the whole upon the earth and rather near the middle of the road. On suitable occasions, I would try to speak the word in the crowd which would marshal sentiment, set up standards, and fix the pace. I would draw upon the moral sense, which is never lacking in a college throng, to brace up the weak, and cool off the heads that get unduly heated. If, after that, the bad persisted, I would join the issue so squarely that in a little time the air would be clearer and the outlook more encouraging,—or else the demonstration would be absolute that a new administration would be a good thing to have.

There ought to be no difficulty about the university managing the boys who manage the athletics, or settling the tone and character of the athletic work. The authority is as absolute as the responsibility is immediate. It is the common law of the schools that their authority covers everything that may aid their usefulness or stain their good name. None can use the name or fly the flag of an institution without submitting to its direction, or else being posted as a fraud. Only a sincere and authoritative word to any student should be sufficient. If students ever band together to resist the deliberate word of college authority, it is not altogether certain that they are wrong, but there is no possibility of doubt about the fact that they need a wallop that will last a student generation, and be handed down to student generations which come after; or that the college needs a government that can govern. But happily be it said that such cases are so unusual as to be hardly in the reckoning at all.

Then let us hope that the great universities will serve the good cause of physical prowess and strenuous sport in all the schools by saving this game. If they request, the rules will be changed so as to make the game more open and attractive, less hazardous and unseemly, and so as to make the maiming of an opponent under the pile impossible. A university direction that none shall represent it in an inter-university contest but a matriculated student who has been in residence a year, would very nearly settle matters. The factors of a game are bound to square with the honor of the university, and the management of the university is bound to see that they do. The insistence that the gate fees, which are senselessly high, having amounted to \$60,000 at a single game, shall be at a rate which does not discriminate against great numbers who love the sport and want to follow the flag, would be a good preventive medicine against a malady that is becoming too common and serious in university life. If, beyond this, it might become distinctly understood that there is nothing in common between a university and a saloon, and that it is a crime in the university, as it is in the state, for a boy to gamble on university contests, about all the grounds for the criticism which I have set forth would be removed.

If it be said that these measures would take the life and the interest

out of the game, I answer that I do not think so, but if so, then the life ought to go. Any game which is not consistent with full college work on the part of the players; any game which does not beget moral character and true manliness on the part of the truest lovers of sport; any game which must be handed over completely to professional coaches, who use up boys to vindicate systems of coaching, and who are strangers to the main and enduring purposes of college life, will have to go. If the enthusiasts are not on their guard, they will prove more than they would wish.

Possibly I have occupied too much time with college athletics, but it comprehends the whole matter. Children imitate their seniors; the schools below imitate the schools above. And they are more aggressive in imitating the vices than the virtues. The high schools, and the little boys in the primary schools, and the kindergartens imitate the play and the sports of the colleges, and they copy the worst phases without appreciating the best. Put college athletics upon a sound footing, and you make matters easy for all the teachers and all the parents of the country. The responsibility of college authorities concerning the purity and influence of all play and sport, of all games and contests, is obvious and weighty. The better sentiment of the country should enforce the responsibility. The colleges and universities will willingly respond, but they need the support of insistent public sentiment.

All of the responsibility is not upon the colleges. The extent to which students in the high schools are often encouraged to seize upon a freedom which is only permissible with older students, and to use it in dangerous ways, is absurd. It seems to be going from athletics to organizations and activities of every kind. The responsibility of boards of education and faculties is immediate, and the authority is absolute. It is needless to say that whatever involves the good name of the school, that whatever concerns the moral sentiment of boys and girls, is to be dealt with. We all owe something to them. I am for paying what we owe.

Five or six years ago I had occasion to leave my home early on the morning after Thanksgiving—the morning corresponding to this one—to meet an engagement at a teachers' association. On the way the football team from one of the central and conspicuous high schools of the country, who had been out to play a Thanksgiving game, came into the car on their way home. They had been victorious, and their conduct was beyond description. Boys of the high school age, who manifestly lived in respectable homes, seemed to think it manly to indulge in profanity and obscenity with a familiarity which was shocking. They passed a bottle of liquor from one to another, and when the train stopped, went out to have it refilled. The conditions were appalling and most suggestive. I think I owed those boys something; I did what I could to pay it. I think I owed the management of that high school something: I did what I could to pay that. But the

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supreme and controlling wrong of it all was that they should have been travelling alone, and under such conditions at all. I lift up my voice against a view of athletics or administration which could make such a gross development, such a menace to young men, possible. Does one say that they are to take care of themselves, and to learn to do it by doing it? Yes, when the time comes, and gradually. Not at the high school age, nor at any other time if there is not sufficient promise of maturity and sense enough to do it. Parents and teachers are on earth to do it, and they had better not abdicate the function.

Let me, in coming to a conclusion, recapitulate. This is my physical training and athletic creed up to date. But this, like all creeds, will perhaps need rewriting now and then:

1. Work and play are vital to the growth of physical symmetry, strength and skill, and the rounding out of the perfect man.

2. The more real the work, and the more natural the play, the better.

3. Where these are lacking it is desirable to create artificial means for supplying them.

4. Mind, heart, and body are dependent upon each other, but not equally dependent.

5. Physical training is not to be counted among the fundamentals or the essentials of the common school system; it is not incompatible with that system; special circumstances are to determine whether the schools should assume it. There is little call for it in the rural districts and small towns, but more where the population is congested and resources are ample. There is not much call for it in the primary schools, but more in the advanced schools.

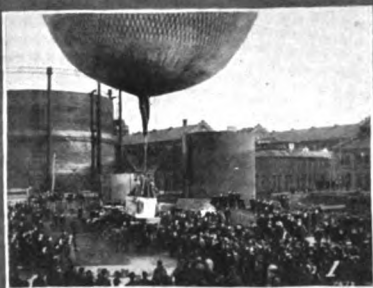
6. The main business of the common elementary schools is to initiate the correct use and expression of the intellectual faculties, with such reference to moral sensibilities as the régime of the system may impose and the opportunities of teachers, with correct moral perspective, will afford—and with such regard for health and balanced physical development as sanitary schoolhouses and sane teachers, with a little general assistance by special teachers, in the cities, make practicable.

7. In the secondary schools special facilities for physical training, such as gymnasiums, are quite permissible, but here too the conditions of population and the neighborhood feeling should govern, and nothing should be undertaken without a good understanding of all that is involved, or without carrying out all that is attempted in good form and completely.

8. In the advanced institutions physical training is practicable, should be provided for, and, generally speaking, may well be required.

9. Contests of strength, endurance, and skill between individuals are desirable.

10. The lowering of records is a distinctly laudable ambition, because of the bearing of individual accomplishment upon all concerned,



BALLOONING, FENCING, DUMB-BELLS AND WRESTLING

1. A Balloon Ascent. Just Leaving the Earth. Dr. Thomas photographing the crowd beneath him. The other occupants of the balloon are Charles Levee and the Comte de la Vaux.
2. A Society Girl who is a devotee of fencing, in a bout at the Fencing Club.
3. A Gymnasium Class at dumb-bell exercise.
4. Wrestling.

but the highest consideration is the growth of physical proficiency in the multitude.

11. Team contests have a more distinctly invigorating influence upon students and upon the common thought of the country than individual contests, but they are encompassed with corrupting tendencies which demand the alert oversight and more decisive protection of competent authority.

12. Students are to manage student contests, but only when the management is thoroughly compatible with the ideals of the institutions represented. There is no school freedom not consistent with the ends for which schools stand.

13. An institution dishonors itself when it permits one not a regular and genuine student to represent it.

14. Any physical work or contest incompatible with regular student work bears heavily upon a few and discredits all of the serious work of an institution.

15. A system of coaching which cares nothing for the man who is a factor in a game, which stops at no method, which cares only for success and for the prestige of a professional coach, and which is not representative of the honor of an institution, is vicious and intolerable.

16. A contest between educational institutions must be free from features which make for profligacy or corruption.

17. The use of athletics to advertise an institution is reprehensible.

18. No sport can stand for an institution which, by reason of the large gate fees, bars out (or ought to) a large percentage of the constituency of the institution who want to be present at its contests.

19. The friends of college sport will have to fight for its integrity, and the more inspiring it is the more the barnacles of society will seize upon it and the more true manliness ought to contend for it.

20. Physical exercise and open-air play are very great factors in the development of men, and in the evolution of the social health of a people. Educational administration should make use of them, and should be held responsible for keeping them clean and making the most of them. In the athletics of the school system as in everything else associated with the schools, the government of the schools is bound to govern.

These seem like commonplaces and platitudes. It is hoped they are. If they are, there is no dissent. But it is rather obvious that some of them may claim a fuller measure of enforcement.

I have discussed the physical training and athletics for boys. I am quite aware that there are phases of the question which concern the girls.

This is no mean subject. It goes to the decline of physical vitality in the cities, and would postpone the death penalty which nature imposes upon people who are useless. It not only bears upon the character of the educational system and exemplifies the conscience

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of the nation, but it goes to the making of character and conscience in school and nation. The plays and sports of a people, when guided by conscience, make for toleration and forbearance; for strength which makes littleness and petulance unseemly; for world relations which are self-conscious and direct; and for an effectiveness on occasion which uplifts free institutions in the eyes of all mankind. Life in the open gave us Lexington and Concord and Bunker Hill, and life in the open must make good the assurance that "there they will remain forever."

PHYSICAL TRAINING AT HARVARD.

BY

DR. DUDLEY A. SARGENT, DIRECTOR HEMENWAY GYMNASIUM, HARVARD UNIVERSITY. AUTHOR OF "HEALTH, STRENGTH, AND POWER," ETC.

If the work of Dr. D. A. Sargent, the director of the Hemenway Gymnasium, at Cambridge, Mass., were expunged from the field of gymnastics it would be found that America's original contributions to the cause of physical training have been comparatively, until recent years, few. But with his inventions America is able to make a very respectable showing of originality. His "chest weights" in their various forms, and his other machines in the American gymnasium, give it an individuality and a national character that it would otherwise lack.

The athletic clubs, the Young Men's Christian Associations, and most of the college gymnasiums have adopted Dr. Sargent's ideas very largely, and the following extracts from his address before the Physical Training Conference are, therefore, useful in describing the practices of those gymnasiums as well as that at Harvard under Dr. Sargent's immediate supervision:

That you may understand what the system is in its present form, as carried out at Harvard University, let me ask you to follow me through one of the physical examinations of a student, and see what we do for him. Every student who enters the university is entitled to an examination, and 87 per cent. of the whole number avail themselves of this privilege.

As soon as the student presents himself at the director's office (which is done by application and appointment), he is given a history blank, which he fills out, giving his birthplace, nativity of parents, occupation of father, resemblance to parents, natural heritage, general state of health, and a list of the diseases he has had, all of which information is absolutely necessary in order for the examiner to put a correct interpretation upon the observations to follow. The student is then asked to make certain tests of the muscular strength of the different parts of his body and to try the capacity of his lungs.

He then passes into the measuring room and has his weight, height, chest girth, and fifty other items taken. His heart and lungs are then examined before and after exercise, and a careful record made of the condition of the skin, muscles, spine, etc., which the tape measure fails to give.

All the items taken are then plotted on a chart, made from several

thousand measurements, and the examiner is then able to know the relative standing of this individual as compared with others for every dimension taken, also his deviation from symmetry and the parts which are in special need of development.

To confirm the plotting of the chart, and to awaken in the young man a genuine interest in his physique a photograph of each student desiring it is taken in three positions, and preserved for comparison with those to be taken of him later.

From the data thus procured a special order of appropriate exercises is made out for this student, with specifications as to the movements and apparatus he may best use. At the present time this special order consists for most students of an illustrated handbook, in which the apparatus, the weights for it, and the times to use it, are carefully prescribed, together with such suggestions as to exercise, diet, sleep, bathing, clothing, etc., as will best meet the needs of the individual under consideration.

Now I think it will be admitted by all thoughtful persons that one-half the battle for mental education has been won when you arouse in a boy a genuine love for learning. So one-half the struggle for physical training has been won when he can be induced to take a genuine interest in his bodily condition, to want to remedy his defects, and to pride himself on the purity of his skin, the firmness of his muscles, and the uprightness of his figure.

Whether the young man chooses afterwards to use the gymnasium, to run, to row, to play ball, or saw wood for the purpose of improving his physical condition matters little, provided he accomplishes that object.

The modern gymnasium, however, offers facilities for building up the body that are not excelled by any other system of exercise. The introduction of the new developing appliances has opened up the possibility of the gymnasium to thousands to whom it was formerly an institution of doubtful value. The student is no longer compelled to compete with others in the performance of feats that are distasteful to him. He can compete with himself, that is, with his own physical condition from week to week, and from month to month. If he is not strong enough to lift his own weight, the apparatus can be adjusted to a weight he can lift. If he is weak in the chest or the back, he can spend his time and energy in strengthening those parts without fear of strain or injury.

In fact he can work for an hour, going from one piece of apparatus to another, keeping always within the circuit of his capacity, and adding slowly and surely to his general strength and powers of endurance. If the heart is weak, the lung capacity small, the liver sluggish, the circulation feeble, or the nervous system impaired, etc., special forms of exercise can be prescribed to meet these conditions.

Gentle running is usually advised as a constitutional exercise for all of those who can take it. This is usually severe enough to start the

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perspiration and make a bath of some kind desirable. A tepid sponge or shower bath is generally advised; and in my opinion, the bath which regularly follows the exercise at the gymnasium, and the habit of bathing established thereby, is almost as valuable as the exercise itself.

After a period of six months or more the student returns again to the director's office, and has another examination, in order to ascertain what improvement he has made and to receive any new suggestions.

This, in brief, is the educational part of the system of physical training carried on at the Hemenway Gymnasium. . . . Now let me invite your attention to a consideration of some of the theories and principles upon which it is founded.

"The characteristic physiological property of muscular tissue, and that for which it is employed in the body," says Martin,* "is the faculty possessed by its fibres of shortening forcibly under certain circumstances." This property is called contractility, and upon the full performance of this function depends not only the healthy condition of the muscles, but of the various parts of the body with which they are connected.

Now, what are the circumstances under which a muscle performs its greatest contraction?

First. There must be a succession of strong and oft-repeated stimuli. Second. The muscle must have a load to carry or resistance opposed to its shortening.

This can be illustrated by the experiment so often conducted in the physiological laboratory. Take a muscle without a weight attached to it, and apply a stimulus. The muscle will contract, say a quarter of an inch. Now apply a weight of 1 pound to it and apply the same stimulus. The muscle will contract half an inch. Attach a still heavier weight, say 2 pounds, and apply the same stimulus, and the muscle will contract 1 inch.

And so the experiment could be carried on until a weight was attached which would cause the contractions of the muscles to be less and less until they finally ceased. "So that up to a certain limit, resistance to the shortening of a muscle makes it more able to shorten, and the greater extension of the muscle due to the greater resistance opposed to its shortening puts it into a state in which it is able to contract more powerfully."

Upon the interpretation of this simple physiological fact depends the foundation of two great systems of physical training—one faction advocating that the antagonizing muscles in free movements, without apparatus, furnish all the resistance that is necessary; while the other faction claim that the resistance afforded by opposing muscles is not sufficient, and that weights of some kind, or apparatus, are necessary to bring out the working force of the muscle used.

I believe that the last conclusion is the correct one. . . .

*"The Human Body" (chapter x.), by H. Newell Martin, D. Sc., M. A., M. D.

We saw in the laboratory experiment that when the muscle simply lifted its own weight it did no work, and that nothing was accomplished when it tried to lift a weight too heavy for it, but that there was an intermediate weight that it lifted to the greatest height and did the greatest amount of work.

What is true of this single muscle is true of all the muscles of the body; there is a certain weight with which the different groups of muscles can do the most effective service in a given time. If the weight is too light or too heavy the best effect of the exercise is not realized.

This may be illustrated by the familiar use of the chest-weights (so called). If you go through the movements without any weight the exercise is insipid. If, on the other hand, you load the boxes up to their full capacity you will find that there are only one or two movements that you can do, and these only for a minute or so. Now, if you have carefully gauged your strength to about five pounds (which is, perhaps, the average weight used in these appliances), you will find that you can go through the full set of exercises (comprising some forty or fifty separate movements) and feel that you have accomplished something that will be a benefit to you. This statement is equally true of all the different developing appliances found in a well-equipped gymnasium, and to the fact that our modern apparatus can be adjusted to the strength of the strong and the weakness of the weak, may be attributed a large part of the value and popularity of those thriving institutions.

But there is another principle now taken advantage of, to which the modern gymnasium owes a great part of its efficiency. In view of the tendency of the times I cannot help thinking that it is a valuable one.

In primitive races individuals of the same tribe bear a close resemblance to each other. As they progress in civilization difference of function begins to work a difference in structure, and we begin to get a marked variation in size, form, and feature.

In highly civilized communities the minute division of labor carries this variation still further, so that it is not only possible in many cases to distinguish individuals by their calling, but the particular branch of work in which they are engaged can be easily determined by its influence upon their physical structure. In other words, men are moulded by their trades and occupations, and many of the diseases with which they are afflicted arise from physical defects due to faulty positions and want of appropriate exercise. Perhaps no class in the community have their physical characteristics more marked than the student class. The type may be distinguished by a drooping head, flat chest, hollow back, and constricted ribs just over the stomach. It is not necessary to look for the causes of these defects. They are faulty positions while studying, pressure of the desk against the body, the constriction of clothing during the growing period, the relaxed state of certain muscles, and the overstrained condition of others.

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Most occupations, including that of the student, tend to overuse the flexor muscles and to compress and constrict the body, thus lessening its internal capacity and interfering with the functions of important organs. Thus, the resistance of the clothing, weights lifted and borne on the back or shoulders, and even the use of heavy dumbbells for health's sake all tend to force the ribs downwards and lessen the diameter of the thorax. To remedy this evil a system of artificial exercise is necessary.

Just here we touch upon a principle that has escaped the attention of most teachers. If this deformity is brought about by the natural action of the muscles—that is, by their acting centripetally from their origin to their insertions—surely the remedy is to make them act centrifugally from their insertions to their origins. By grasping a bar or a pair of rings above the head, the parts where the muscles are inserted become fixed, and if the muscles contract, the parts from which they originated must move.

In this case all the diameters of the thorax are increased and the chest capacity enlarged. In this principle lies the value of the rings, trapeze, ladders, parallel and horizontal bars, and, in fact, all of the climbing appurtenances, to those who are able to use them. By the invention of the chest-expander, chest-developer, quarter-circle, high pulleys, and inclined planes, travelling parallels, and similar apparatus, the same principle can be applied by any one, however weak, and the same result can be accomplished. It requires a little more time, but the effect is likely to be more durable.

By the use of the pulley-weight system resistance can be applied to any part of the body from any direction. In this peculiar property lies its great value as a means of enlarging the thoracic cavity and counteracting the cramping and constricting tendencies of modern occupations.

I have dwelt upon these principles at some length because I have reason to believe they have not been well understood by persons interested in the subject. Some of the other theories that have guided me in formulating a system of exercises I shall state briefly in the form of a summary, together with those I have just mentioned.

As far as I have been able to discover, they are based on sound physiological principles.

- (1) The person should be sufficiently interested in the exercise to give it his attention in order to secure the necessary volitional power to start the movement. Whether the exercise is interesting in itself is a matter of little consequence.

- (2) There should be a weight or resistance to overcome in order to bring out the working force of the muscle. In using a weight the muscle gradually acquires the force with which it tries to contract.

- (3) The exercise must be performed with sufficient vigor and rapidity to engage the energetic contraction of the muscles employed. When this is done, old tissue is broken down and its place is supplied

with new material in increased quantity, thus augmenting the size and strength of the muscles. The brain gains the power and energy which the exercise requires it to put forth.

(4) Weak parts must first be strengthened, and then as many muscles as possible must be brought into action in order to secure a full-orbed and harmonious development of the whole body. One-sided development is usually attained by robbing some other part of its just share of the body's nutriment. Most persons in their daily occupations use the flexor muscles more than the extensors, thereby cramping the vital organs and interfering with their functions. To remedy this tendency the muscles should be made to act from the centre as far as possible in all forms of artificial exercise.

(5) A sufficient number of muscles should be called into action at one time to stimulate the action of the heart and lungs and increase the circulation and respiration. This is one of the most important considerations to bear in mind in regard to exercise. To keep up this increased respiratory activity, and to aid the heart in removing the waste material and hastening forward the new, the limbs and walls of the chest must be absolutely free from any ligatures or constrictions. The slightest interference with the action of the respiratory muscles at this time embarrasses the functions of the lungs and heart. This is the reason why loose clothing is always advised for exercise.

(6) As a latent period precedes the contraction of a muscle, so a momentary period of rest should as far as possible precede movement in exercise. This is best secured where there is an alternation in the movements, as in walking, running, rowing, etc. All tetanized movements, such as holding weights, attitudinizing, standing or sitting in a constrained position, etc., tend to impair the tone of the muscles by interfering with the nutrition of both muscles and nerves.

(7) The exercise of the young should be of such a composite nature as to bring about the coöperation and coördination of the muscles. This involves principally the training of the central nerve system. All gymnastic sports and athletic games that require skill, dexterity, coolness, courage, and presence of mind, are included in this list, and are exceedingly valuable to any system of physical training as adjuncts in the development of character.

(8) All vital processes depend largely upon the maintenance of animal heat. But animal heat is now known to be generated in the blood while passing through the muscles, and not in the lungs, as was once supposed. The full contraction of the muscles greatly aids this function, and helps to force the warm blood through the tissues and back again to the heart.

(9) In order to realize the best results from physical exercise and keep up the general nutrition of the body, all muscular effort should be followed by a bath or vigorous stroking and rubbing.

(10) In every kind of physical exercise the qualities at first required

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are the qualities at length developed. Thus, if the exercise requires strength, strength will be the result; if courage is exacted, courage will be the outcome; if quickness, quickness; and so through the whole range of faculties exercised.

Knowing what is desired, it is an easy matter to prescribe the appropriate training. . . .

What America most needs is the happy combination which the European nations are trying to effect; the strength-giving qualities of the German gymnasium, the active and energetic properties of the English sports, the grace and suppleness acquired from the French calisthenics, and the beautiful poise and mechanical precision of the Swedish free movements, all regulated, systematized, and adapted to our peculiar needs and institutions.

The highest development of strength, activity, and grace is not compatible in the same individual, and consequently many persons prefer to sacrifice one in order to gain the other. But life's forces are well adjusted and well balanced.

PHYSICAL TRAINING.

SPECIAL ADVICE TO BEGINNERS, WITH CORRECTIVE EXERCISES.

BY

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BOSTON, MASS.

WE need no statistics to prove that never in the world's history has there been a greater need of strong, vigorous men; nor has there been a time when the mode of living had a greater tendency toward the degeneration and decadence of health. This age of rapid transit and living fast in the crowded cities calls loudly for a mode of life that shall counteract the baneful tendencies of this great expenditure of neural force.

The relation of gymnastic exercise to the neuro-muscular requirements of the present-day conditions of life will be made clear if we consider briefly the object of proper exercise.

Proper exercise will train the muscles to obey promptly the dictates of the will. This is important, as almost one-half of the entire weight of the body is muscle, and the muscles are the only organs under the control of the will. The development of huge muscles and great strength, however, is wasted energy.

Proper exercise will increase the functional activity of the heart, lungs, digestive and excretory organs, and the life growth and function of the cells, and so increase the nutrition, furnish more oxygen, and free the system of poisonous waste products. It prevents the in-

road of disease by maintaining a vigorous, healthful body that will at the crisis resist the onset of disease germs.

It will overcome bodily deformities and defects which are the result of nearly every occupation. It will also develop invaluable moral and mental qualities as nothing else will.

The deleterious influence of the complicated city life, with all but a few hours of each day spent indoors without proper exercise, brings about ill health and nervous break-downs that can only be avoided by obeying the laws of health.

Exercise will surely be beneficial to you if you take the work regularly and observe the following suggestions:

1. Get a medical and physical examination to find out what exercises are best suited to your needs. Follow out your prescription.
2. Join one of the classes and be regular in your attendance.
3. Observe the rules for bathing.
4. Avoid over-exercising. Stop before becoming very tired.
5. Do not start in too vigorously. If you get stiff and sore continue your exercise and the stiffness and soreness will soon disappear.
6. To avoid soreness, if not accustomed to exercise, take light work for fifteen or twenty minutes and do not stand around after exercising or bathing. Gradually increase the amount of exercise.
7. Practise deep breathing in the open air, breathing through the nostrils.
8. Eat moderately of plain food, using a mixed diet, especially of fruit and grain. Observe the hints on diet and avoid the foods that are hard to digest.
9. Rest is as important to health and vigor as exercise and food. Sleep in a well ventilated room on a hard bed, using light coverings, and get from seven to nine hours' sleep.
10. Drink plenty of pure water, avoiding all stimulating food and drink, and keep the bowels open.
11. Have a special time for your exercise and be as regular as with your meals.
12. Begin with light exercise, work up to more vigorous work, and finish with light hygienic exercise.
13. Spend the first part of your time in following out your prescription of exercise.
14. If you feel tired from a day of hard mental or physical work, exercise of the right kind will rest you.
15. Do not strive for huge muscles or great strength, as it is wasted energy in most cases.
16. What you can do is a better indication of improvement than size.

Food.

1. Have regular hours for meals.
2. Use a mixed diet of plain food, avoiding the foods that are hard to digest.

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3. Chew your food well; eating slowly aids digestion.
4. Do not live to eat, but eat to live. Strength comes from what you digest and not what you eat.
5. Avoid all stimulants, such as spirits, tea, coffee, and tobacco.
6. Avoid all foods that habitually disagree with you.
7. Never eat just before or after exercise, or when tired, physically or mentally, or excited.
8. If troubled with dyspepsia, go to your physician or the medical director.
9. Keep the bowels in order by establishing regular habits, and thus avoid disease.
10. Do not take up with new diet fads if you value your digestive organs.

Bathing.

1. Take your bath after exercise before you have cooled off.
2. Use a graded shower, beginning with lukewarm water and finishing with a dash of cold.
3. Rub the body vigorously before and after the bath, rubbing toward the trunk.
4. Spend from two to three minutes in the bath, and from three to five minutes in rubbing and drying the body. Vitality is wasted by too long or too frequent bathing.
5. Never take a cold bath when tired, exhausted, or shortly before or after meals or severe exercise.
6. Cold morning baths and steam baths should only be taken under a physician's advice.
7. A very wise precaution is to wait five or ten minutes in the building after you have dressed. When you go out of doors button up your coat, breathe through your nose, and don't stand on the street.

To Reduce the Weight.

1. Take regular vigorous exercise daily, so as to perspire freely.
2. Take cold baths, using the precautions under the hints on bathing.
3. Do not sleep more than seven hours.
4. Drink less, eat less. Avoid sweets.
5. Eat proteid and dry foods and acid fruits.
6. For obesity take exercise for the abdominal, waist, and back muscles, and all movements in which the thighs are crowded into the abdomen.

To Increase the Weight.

1. Take regular, slow exercise, and deep breathing.
2. Eat plenty of the foods containing starches, sugars, fats, eggs, milk, etc.
3. Avoid condiments, acid fruits, and stimulants.
4. Rest after meals.

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5. Sleep eight to ten hours.
6. Baths should be brief and not too frequent, with a dry rub night and morning, and a massage if the skin is dry.
7. Do not worry. Take plenty of time for recreation.
8. Relax and have a good time at your exercise.
9. Keep the bowels regular.

For Constipation.

1. Exercise regularly, using the movements for the trunk, and those in which the thighs are crowded into the abdomen.
2. Eat fruit, bulky foods. Avoid constipating foods, such as milk, cheese, eggs, and fried foods.
3. Drink water freely. Take a glass of cold water at bedtime and upon rising.
4. Have a regular hour for evacuation.

For Rheumatism or Neuralgia.

1. Take light exercise, keeping the body thoroughly covered and warm.
2. Keep the feet warm.
3. Do not cool off suddenly, or take cold baths.
4. Regulate the bowels.

THE PLACE OF GYMNASTICS IN MODERN LIFE.

BY

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THE place of gymnastics in modern life is certainly great. Our forefathers seemed not to need it since their occupations were physically active. But modern machinery and city life do away with much physical action of a great many people, and something must be substituted. Physical, and indeed mental, vigor depends upon muscular motion, and for those whose occupations do not demand it a substitute must be made. This substitute is found in gymnastics. The object of gymnastics is not primarily for show or novelty, but for health. He is wise who early learns to take care of his physical powers in our modern artificial life. Thus from the standpoint of education alone, a practical knowledge of gymnastics is absolutely necessary to the youth who desires to become a leader or even a success in business.

To get the best knowledge of gymnastics as a means of promoting health, it is best to join a gymnasium that employs expert instructors. Many schools and clubs and Christian Associations have thorough courses. The subject has become so prominent that provisions are

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being made for this important help to education in every school and college of importance.

From the standpoint of health, the best gymnastics are those that all may perform easily, that do not require great skill. This is best accomplished by calisthenics. This term includes exercises without apparatus, called "free exercises," also exercises with dumbbells, clubs, wands, pulleys, and other light movable hand apparatus used in mass class work. The variety of possible and desirable movements in calisthenics is so great that a person has a wide latitude in selecting those for either private use or formal class work. In any case, if health is the aim, vigorous movements should be chosen as well as those that exercise the large groups of muscles of legs and arms, as well as those that are adjacent to the vital regions of the body, the chest and abdomen. A rational health drill should include the types of movements illustrated on page 359.

A. *Exercises for the lower extremities.*—(1) Leg movements standing: (a) flex thigh. (Fig. 1) high kick; (b) abduct thigh (Fig. 2); (c) extend thigh (Fig. 3). (2) Charges or lunges (Fig. 4); (3) squatting movements (Fig. 5); (4) hopping movements: (springing lightly on one foot or alternate foot with various evolutions usually included under the head of fancy step or gymnastic dancing).

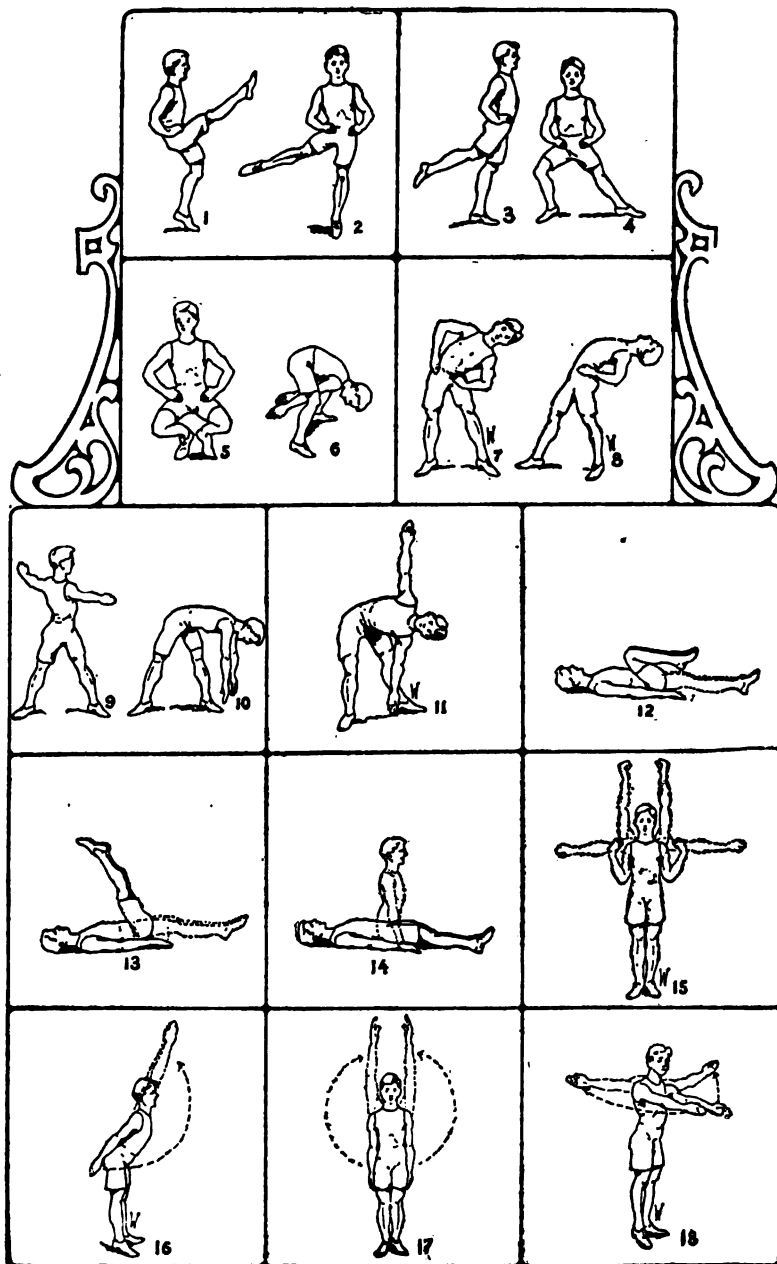
B. *Exercises for the trunk.*—(1) Bend body: (a) forward (Fig. 6); (b) sidewise (Fig. 7); (c) backward (Fig. 8). (2) Rotate body (Fig. 9); (3) rotate and bend body (Figs. 10 and 11); (4) lie on back: (a) flex thighs and legs (Fig. 12); (b) flex thighs (Fig. 13); (c) raise body to sitting position (Fig. 14).

Gymnastics are not limited to producing and maintaining health, but are also used for correcting physical defects, to overcome round shoulders, flat chests, and other common faulty positions. A good carriage of the body is worth a fortune. The time to acquire that is in youth. Little or nothing can be done to correct defects after twenty years of age.

The best types of exercises to help maintain a good carriage are those with the body inclined forward from the hips while performing the following movements with the arms:

(1) *Arm extensions:* (a) side horizontal (Fig. 15); (b) up (Fig. 15). (2) *Arm swings:* (a) forward up (Fig. 16); (b) side up (Fig. 17); (c) forward and backward (Fig. 18). (3) *Arm stretch backward and down:* (a) Reach backward as far as possible with arms at side horizontal; (b) clasp hands back of hips and reach back and down. This position may be held at any time, and indeed should be done often, by those who are inclined to stoop shoulders.

Another purpose of gymnastics is to develop strength by increase of size of muscles. Size of muscles is not the most important object of exercises as many people think, although it is the most widely advertised feature; yet size of muscles usually denotes strength and physical vigor, therefore it must be considered in this connection.



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The best method of developing strength and muscular capacity is by means of "tension calisthenics," or by gradually increasing the weight of pulleys and bells. If the tension method is used, no kind of apparatus is employed. All one has to do is to act as though one had a heavy object to lift, and thus make the muscles rigid while performing slow straining movements. Emphasis must be placed upon performing the movements slowly and in exercising the various groups of muscles separately. The following exercises are best for this purpose:

(1) *For the neck*: Bend the head forward and backward or sidewise, while rigidly contracting the muscles, or twist the head slowly from side to side.

(2) *For shoulder muscles*: Raise arms from thighs to side horizontal.

(3) *For Arm*: Strongly flex the forearm as in "showing your muscle," then extend slowly.

(4) *For forearm*: Clench the fist strongly.

(5) *For chest muscles*: Hold arms flexed, and almost as high as shoulders, then make strong, slow movements backward and forward.

(6) *For the back*: Bend forward, then slowly raise the body as though lifting a heavy weight.

(9) *For the abdomen*: Brace the feet and bend body slowly forward, resisting as though pushing a heavy object.

(10) *For the front thigh muscles*: Bend legs to squatting position, then slowly raise to stand.

(11) *For the back thigh muscles*: Slowly lift heel backward, resisting.

(12) *For the inside thigh muscles*: Slowly abduct (cross) one leg while standing on the other.

(13) *For the calf*: Raise on toes.

(14) *For the shin muscles*: Raise on heels.

Gymnastics are not only used for health, correction, and strength, but for æsthetic and social purposes. The appeal to the sense of beauty was first made through bodily motion, such as dancing and evolutions. It still holds its place by the same means, and also by large classes performing simple or intricate movements in unison, gracefully done with the accompaniment of music and dress. It certainly has a distinct and unique place in æsthetic culture.

The social features in gymnastics are prominent. Nowhere are friendships made so easily and social relations held so naturally as in combined motor interests. It removes the artificial, and brings mankind back to common-sense means of making and cultivating friendships.

Gymnastics, as a feature of recreation, is one of its largest contributors to life. The pleasure of gymnastic plays and games in youth develops into the pleasure of skilful execution of maturity. In addition there is the pleasure of discovering the secrets of bodily con-

trol and of inventing exercises, and these are directly related to discovery and invention in other walks of life.

Gymnastics plays a prominent part in motor education. By means of it skill in bodily motion is highly developed, awkwardness is overcome, useless expenditure of effort lessened, facility of movement increased, all of which are indispensable in modern business requirements as well as highest usefulness in life.

Much of the above is acquired, not so much by calisthenics, as by exercises on gymnastic apparatus, such as flying rings, parallel bars, horizontal bar, and horse, which are found in all modern gymnasiums, and by special gymnastics, such as boxing, fencing, wrestling, and tumbling.

A WORD ON OUTDOOR EXERCISE.

BY

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EACH and every person has a hobby, and rides it regardless of fashion. Some fish, hunt, row; others gather stones, plants, postal stamps, souvenirs; again some are cranks on baseball, football, golf, lawn tennis, and so forth. Others participate in sports which are dangerous to health, and which they sooner or later regret. The hobby of all great men was and is some outdoor exercise or sport. It seems that the much-occupied intellect demands sunlight and fresh air. He can be well satisfied whose hobby leads him out of the city into nature's beautiful garden. The blue sky, blooming plants, green trees; the brooks, creeks, rivers, in which the fishes play, are wonders which everybody should understand. To study the lives of plants and animals not only broadens our knowledge, but it shows us how important our life is, and how important to preserve it. To preserve vitality is no secret, still it is deplorable that every daily newspaper carries pages of advertisements for sick young people. This necessitates serious thinking and warning, as those life-preservers are not of great reliability and often do more harm than good. Everybody knows, or should know, that outdoor exercises increase vitality and health. Why not have a hobby for a clean, strong, vigorous, healthy body?

Growth requires exercise. The child before school age invents games, which express its genius. Its imagination creates the necessary exercise for the intellectual and more for its physical development. In the modern schools the curriculum carries suitable exercises to develop the motor area of the brain, causing a more harmonious education of mind and body. So we keep the executive office of our

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body, "the brain," the seat of intelligence, in constant practice. This is the will of a superior spirit, whom we follow.

In the battle of life all good deeds are antagonized by an evil spirit. The struggle is fierce. To make the good win is our duty, not only for our benefit, but for those who come after us. If the "good" once wins a complete victory over the "bad," this world will become a paradise. Self-knowledge is the key for the lock that opens the door. Learn to know yourself, and then learn to govern yourself, and you help to win. It is true that the "evil" wins often, but that's worth fighting. The good deeds live and multiply also, and a peaceful and pleasant future is the reward.

Immediately after leaving school the young people look after some "pastimes" and then the foundation of the hobby is laid. To imitate their honest and faithful teachers, to obey their parents who with hard work and sleepless nights looked so long over their welfare, seems the right thing to do. Not all do that. The young boys and girls have ideas of their own, which is not wrong, as long as they tend to do and to follow the good. But it is far better to follow or to imitate a good example than to execute one's own bad ideas. In this period of self-development, the young people should listen to the advice of elders. Experience, the great factor in education and in any undertaking, is on their side, and out of their sorrows and regrets we ought to learn how to live a happier life. The one who can look with pleasure over the past, can look with pleasure into the future. The one who wins over the evil spirit has gained happiness.

Choose a hobby that benefits you. Be honest and clean to yourself. Make a habit of outdoor exercises. Keep a sound mind in a sound body. Whoever possesses a sound mind in a sound body plays an honorable part in the world's comedy.

PHYSICAL CULTURE.

BY

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PHYSICAL Culture means the education of all the physical powers of the human body, and those who require this most are the brain-workers, the student, all persons of sedentary habits, the invalid, and especially the women and children.

I maintain that a sound, practical knowledge of anatomy and physiology would tend more to prevent disease than all drugs and medicines to cure it. It would do so by teaching, among other things,

that a healthful vitality of the muscles of the trunk of the body (the chest, the abdomen, and the back) are indispensable for the healthful working of the visceral organs (the lungs, the heart, and the digestive apparatus), and that such vitality can be maintained for any muscle only by its constant legitimate exercise. But apart from physiology, it is a well-known fact, that muscles are sometimes entirely, and often partially, lost and wasted from mere want of employment.

I think the assertion is susceptible of the clearest proof that in nine out of ten cases congestion and indigestion, and all sorts of dyspeptic disorders, with their concomitants, arise solely from muscular weakness in the parts concerned. The question then arises, how is this state of things to be prevented? And the answer is, by regular and systematic exercise. There are many who try to prevent disease by periodical administrations of medicines; some who at regular intervals (whether unwell or not) take their pills to "assist the liver to act," others who take "strengthening medicines" to give "tone to the nerves," and so on. What an easy thing, indeed, it would be could one sit in his armchair and by swallowing a few doses of some nasty stuff or other strengthen the lungs, fortify the stomach, or insure longevity! Easy indeed! But unfortunately in this world we generally have to fight and to work for what is worth having. And surely if there is anything worth working for it is health, with all its blessings—not that health which means absence from pain, but that which means the stirring pulse of bliss in every breath we draw, and which brings in its train peace, and happiness, and good will.

As a rule, walking is adopted by most persons as their only exercise, but this is very defective, in that it calls only the leg muscles into vigorous action, leaving four other great classes of muscles for the most part unused. These are the muscles of the shoulders, chest, abdomen, and back. The first serve for moving the arms, and the second for expanding the chest for respiration. And since the circulation, as well as the condition of the blood, depends upon the respiration, it is apparent that the energy of the whole process of physical life is directly dependent on the power with which this function is performed. Not only by lack of exercise in general, but especially by want of motion of the arms, respiration is weakened and rendered imperfect, and as a consequence the elastic wall of the chest is either not fully expanded and developed, or becomes abnormally contracted. The blood being from this cause insufficiently oxygenized in the lungs, it is obvious that the conditions established are favorable to diseases of the heart and lungs, and other organs.

The muscles of the abdomen aid by their contractile power to strengthen the functions of the abdominal organs, as, for instance, digestion, and they also coöperate most efficiently with the chest muscles in the act of respiration, and with others for producing

a variety of movements. The importance of preserving the elasticity and strength of this class of muscles is therefore obviously great.

The muscles of the back keep the body erect, move it from side to side, and coöperate with those which govern respiration; they hinder any cramping of the stomach and other abdominal organs, whereby the latter are enabled to perform their functions as freely as possible. It is thus easy to perceive that development of these muscles of the trunk will not only prevent curvature of the spine, or crookedness, but a train of evils of greater consequence.

Now, let us look into those places where persons go to take their exercise, the gymnasiums, and you will be astonished in the most of them to find that men with strong arms and well-developed chest are constantly swinging clubs, pulling chest-weights, or performing other movements with arm apparatus, while they do nothing to develop their thin legs or weakened abdominal muscles. On the other hand, men having strong legs incline to constantly develop them, leaving the arms and upper portions of the body without proper exercise. Good jumpers will keep on jumping; good runners will run; good throwers will throw or put shot, and so on. Again, you will observe that they frequently use very heavy weights, so that each pull or lift will bring on their greatest effort: their faces are becoming purpled, as though they were going to have an apoplectic stroke, and they are working and blowing like small steam engines.

Further, I must say, that even many of our popular sports, such as bicycling, lawn tennis, baseball, rowing, etc., although among the best, and ought to be practised by everybody, also give an incomplete and "one-sided" exercise, and hence a partial development. Well, what is there to be done? The walking is not sufficient, the average gymnasium, and even our outdoor sports, do not give the right development.

Again, the answer is, "take regular and systematic exercise." Go to any gymnasium where there is a competent teacher, who has given his time to the study of the human body and its requirements, and who knows how to lead you on gradually upward from the simplest exercises to the heavier ones, letting each exercise link into the other without any strain or particular effort of the muscles.

You do not go to the gymnasium to be an athlete or acrobat, etc., but to produce a healthy growth of your whole body, and to maintain a strong and healthy physique.

In judging of the effects of exercise we think the least of the muscular development produced, for the effect of all general exercise is to develop muscle, and this aim is reached without especially working for it. But we think all the more of the effect produced on nerves, blood-vessels, etc., for the result in this direction can be vastly changed by varying the movements. Measuring a man's strength, we should compare the man to himself. We must not say that a man

is strong because he can lift so many pounds, or jump so high, etc. But when he possesses a healthy, well-balanced, and well-proportioned body, which his will has under good control, then he possesses "physical culture," even though in the eyes of some he may seem weak as compared to others.

Every boy and girl can obtain good health and physical culture if they will only try; even if they cannot go to a gymnasium where there is a good teacher.

By "home gymnastics" and plenty of sunshine, fresh air, good food and water, the most delicate child will gradually become strong. Don't keep the sun away from you by shades, etc., but be right in it (except in the hottest summer days) and as much as possible. Have all the fresh air you can get, and sleep with open windows summer and winter. Eat good, digestible food, and very little of pies, pastry, candy, hot bread, etc. Drink water (not ice water) between meals, but not with meals; and bathe often; a cold bath every morning is especially good for most persons.

Then take some exercises such as are prescribed elsewhere. They are all good for anybody, but some may suit one case better than another. Try to take each exercise in as good a form as possible, and you will be astonished to see the result.

GYMNASTICS.

BY

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CITY life has come to stay, and where a century ago, but a small percentage of the population lived in cities, now as high as 90 per cent. in many states exist. Men prefer to engage in those activities which they can best do, and by exchanging the product of their specialized labor for the necessities produced by others, they may have more and better. The pioneer who provided all that his family had, lived a strenuous life, but not a nerve-racking one; his life was hard but in a way calm. Specialized labor, and the invention of labor-saving machinery, the use of cars, telephone, telegraph, etc., etc., mean a strenuous activity in a more or less limited way if engaged in a trade; or no physical life to speak of, if in a store, or office, or profession.

Most city people are living on the physical vitality stored up by generations of hard labor of the forefathers, and three or four generations of city life sap the vitality of every family not crossed by country blood. A family that desires to survive in city conditions must take part in such physical activities as will produce a normal health. Exercise is absolutely necessary, not alone for bodily health,

but increasingly necessary for mental vigor and character. To prove that the mental power and force of character of manhood depend very largely upon the extent and variety of one's early physical training, one has but to compare the city men who as boys were members of groups whose basis for activity was some wholesome play or game, with the men who as boys never played or exercised more than they were forced to. The latter leads to ill-health, selfishness, and individualism, while the former leads to a rugged physical manhood, full of mental vigor and stamina of character, full of altruistic motives.

Gymnastics is a convenient method of supplying to the city man and boy those activities not demanded by his occupation, and which will harmonize his life. In its broadest use, gymnastics includes all physical activities intended for the promotion of vitality. To fulfil the conditions, they must, in a general way, be interesting, beneficial, and vigorous, recreative and relaxing, wholesome and competitive. The best tendency is to do things in congenial groups, which for the average gymnasium are as follows:

Grammar School boys under 10 years of age.

" " " 10 and 11 years of age.

" " " 12 and 13 years of age.

" " " 14 and over.

Freshmen in high school.

Upper class men in high school.

Employed boys under 14.

Employed boys of the apprentice type, 14 to 18.

College men.

Young men, 18 to 22.

Mechanics, etc., over 22.

Clerks and office men.

Younger business and professional men.

Older business and professional men.

In the selection and use of gymnastic exercises several fundamental principles must be observed.

1. Exclusive specialization on such pieces of apparatus as side horse, parallel bars, horizontal bars, rings, etc., and such games as basketball, and any single athletic event are bad.

2. Boys under 18 should never be given exercises on apparatus demanding a long support by the arms, or enter games and events which call for extreme endurance.

3. Particularly in the elementary grades, the apparatus is to be primarily considered an object to get over, as vaults, etc., rather than to perform on, and the aim should be for general rather than local effects, with the chief dosage on the legs.

4. Exercises must not permanently interfere with the fundamental normal organic conditions of respiration, circulation, nutrition, and nervous function.

5. Correct position of thorax is of utmost importance.
 6. Cramped positions and straining exercises on local parts are bad.
 7. Beyond the elementary grades, there may be progression in strength, skill, and courage required, as long as they do not violate the fundamentals named.
 8. Nearly every boy and man ought to take part in some competitive work, the more informal the better; his interest leads him to become an active member in some club or group whose basis of activity is some wholesome play or competition, as golf, tennis, sailing, skating, athletics, gymnastics, baseball, basketball, swimming, etc.
- In city life, a part of a man's spare hours must be spent in engaging with others in those activities which are known to develop power of the type he needs to produce a normal man.

EXERCISE AND EXERCISES.

BY

E. F. BENSON AND EUSTACE H. MILES.

[NOTE.—The authors of this paper and those on Diet and Stimulants and the Influence of Training, are two men who believe that the majority of mankind habitually eat too much and habitually take too much stimulating food and drink. They believe also that most people who do so do not take enough exercise, and that either an increase of exercise or a decrease of stimulant is needed. They believe that the best sorts of exercise are not those of slow pushing movements such as are made in the use of dumbbells, but full brisk extended movements, with much use of the breathing apparatus and the large muscle-areas of the body. Similarly they are in accord as regards present systems of training which tend to treat an entire crew or team as if they were identical specimens, not as widely different specimens; in everyday life also they hold that because a certain mode of diet and work suits A, it will not necessarily suit B and C, though B and C might do worse than try it. They also regard the ordinary acceptance of the word "Training" as far too narrow, and hold that to acquire a high fitness of the body is a duty which should be within the reach of everybody, since a mind housed in a fit body is far more capable of good and sustained work than when its shell is imperfect. For this end they advocate the starting of city athletic clubs, fully convinced that these clubs, with a reasonable attention to matters of diet, would secure for the ordinary city-worker a far higher measure of health than he is at present accustomed to enjoy. Finally, they believe that air, light, and work (and here they do not mind appearing dogmatic) are three prime remedies in the pharmacy of God. And they feel sure that sensuality is bad for everybody.]

IT will not be necessary to go at all deeply into the physiological effects and changes wrought in the body by exercise, but at the same time for those interested in the subject it will be well to sketch in the merest outline the general effect of exercise, and give the reasons why (a rule so universal as to be considered as practically without exception) those who take exercise, especially when they take it in air, where there is a sufficiency of oxygen, are in better health than those who do not.

Now every organ in the body is either in itself a muscle or a system of muscles, or is controlled by muscles. That is to say, none

From "Daily Training," London.

of the infinite processes incidental not only to any movement, but to even perfectly passive life, are independent of muscular action, automatic it may be, and unconscious or subconscious, but still muscular.

The action of the heart itself, for instance, which is, in ordinary circumstances, entirely automatic and absolutely essential to life, consists in the alternate contraction and expansion of muscle, which sends the blood to all parts of the body; and the heart, like all other muscles, can be made stronger with suitable exercises, can be overtaxed by undue strain, and can lapse into feebleness and degeneration if it is not rightly and fully used. For the health of all muscles, apart from their proper nourishment by food and air, lies in their proper use.

All muscles which are within our reach, so to speak, which by an effort of will on our part are made to move some portion of the body, are controlled by nerves, which transmit the message, as through a telegraph wire, from the brain to the required place. By constant use it is possible, as in the case of walking (in itself a rather complicated movement), so to accustom the nerves to send their messages that, after a time, the action of the muscles becomes automatic, and we are conscious of no effort of will to make them work. The instinct of self-protection is another instance of this automatic use of muscles; a man will put up his arm or duck his head to avoid a blow without consciously bidding the muscles of the arm or neck to act. Not only does continued use of a proper kind give this speed to the communication between brain and muscle, but—granted proper nourishment—it gives strength and health to the muscles used; and, broadly speaking, the man who has *all* the muscles of his body in perfect working order, is physically a thoroughly healthy man.

Now the full effects of muscular movement are far too complicated to be spoken of with any completeness. Three, however, of the simplest and most obvious may be mentioned. Exercise, as every one knows, is productive first of quickened respiration, quickened circulation, and heat. Just as an engine burns coal in order to produce the steam which moves it, so the muscles consume material in their working, and this consumption of material again gives rise to waste products partly given off (in the form of carbonic acid gas) by the lungs, which therefore are called upon to supply a greater amount of oxygen. Hence the quickened respiration. Similarly, more blood is required to feed the working part, hence the heart is called upon to supply it with greater speed. And thirdly, since exercise produces heat, and heat perspiration, the pores of the skin are called upon to open for the purpose of exudation, and pass out with the sweat many waste products.* Exercise, in short, develops not only the particular muscles used, but whatever muscle is used, the heart and the lungs as

*Perspiration, it may also be noticed, regulates the temperature of the skin by evaporation. Thus on a hot day after we have cooled down from exercise we feel considerably less warm than before the exercise. "Text-book of Physiology," Schäfer, Part I., p. 669.

well (since they have muscles of their own, which are called upon to work), and it gets rid of waste products in the body by means immediately of the skin, and, if certain most important muscles are used, by facilitating the action of the kidneys and bowels. It also, as we have seen above, quickens the coördination of brain, nerve and muscle, until with practice many movements become automatic instead of comparatively slow. At the same time it uses up nervous force just as it does muscular force, but only temporarily, since rest and sleep automatically (and nobody yet knows how) restore both.

This brief sketch will be enough for the moment to show why proper exercise is beneficial to the body, and it will explain in a rough and ready manner why respiration and circulation are quickened, and why exercise produces (or should produce) appetite. Actual consumption of materials has taken place, and in addition waste products, which give rise to uric acid in the system, have been removed. But though in general these effects (except when from serious weakness of the heart exercise is positively dangerous) are beneficial to everybody, it does not in the least follow that any haphazard exercise is beneficial to everybody. Certain movements, which are to be highly recommended to the robust, would if they were attempted by a man whose muscles were not so developed, be either impossible to him, or, if effected, would strain rather than strengthen him. Again, the object in general of exercise is (apart from its three results mentioned above) to bricken and strengthen harmoniously, and not to cause immense development of one or two sets of muscles, leaving the others comparatively neglected. Of course, if there is special weakness in any part it may be highly desirable to strengthen that part, but as we have said above, what we call mere "Biceps-culture" is, though charming for the biceps, as long as the arm does not get muscle-bound, no better a contributor to general health than would be the cultivation of any other one muscle in the body, while there are many which it would be far more useful to cultivate than this. For by the use of the biceps, let us say, no other organ of the body (except in so far as quickened respiration and circulation is the result of muscular effort) is directly benefited, whereas by the use of the extensive muscles of the chest in a proper manner, freedom and strength are directly procured for the lungs, or by the use of the muscles of the abdomen in a proper manner, the action of certain internal organs is facilitated.

Now the main principles on which we base the system of exercise we recommend are these. Complete development of the muscular system is aimed at, and rapid obedience of the muscles to the will. The muscles should be exercised to their full extent—i. e., they should make the full movement which their contraction allows, and they should also be made efficient in arrested movements; that is to say, they should be able even in the middle of a rapid full movement to stop at once, being in complete control of the will, even as a wolf—and

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this is one of the seven wonders of the world—can check his spring while in mid-air. How? God knows. Mere size of muscle, we believe, is in no way a criterion either of health or of the sort of strength which we consider to be desirable, and it is infinitely better for a man to have muscles of but average size, provided they are prompt and obedient, than to be a Farnese Hercules, if the bulk of muscle which he has made for himself is but slow-moving and incapable of briskness. The Farnese Hercules no doubt could lift weights of prodigious heaviness, but if the acquisition of this power has been attained at the cost of speed and promptitude, we altogether fail to see how he is benefited. Correctness and control are the first objects of muscle-culture; by proper practice come endurance, speed, and often very great muscular power. But power—slow weight-lifting power—should be considered not as the first, still less as the only object of exercise, but as a probable result. Furthermore, though the lifting of dumbbells is exceedingly useful in bringing an exceptionally weak muscle up to the general level of the others, dumbbell work is, in itself, slow movement, and though even its continued use may not be altogether destructive of quickness, yet it cannot in any way be considered as conducive to it. It leads in fact, in the main, to efficiency in weight-lifting, which both in itself seems somewhat useless, is hardly thought of as enjoyable, even by its own enthusiasts, as are games by their thousands of votaries, and is, except under the most careful tuition and supervision, dangerous. But in these quick full movements practised either with no weights at all, or at the most with exceedingly light ones, there is no risk of strain. Again, while to judge by the letters and testimonials sent to well-known schools of physical culture (and published by them) the increase of bulk in muscle seems to be considered in itself a desirable object, the acquisition of this bulk appears even in successful cases to be a somewhat slow and laborious process, and entails more than half an hour's dumbbell practice of slow movements every day. As supplementary to brisk movements, it is more than possible that these mere bulk-acquiring movements have their uses, but to base an entire system on them is to miss the point, so it seems to us, of the culture of muscles, if not to ruin the muscles themselves. It is also most important to see that the exercise for each muscle shall be that for which the muscle is naturally adapted; and exercises designed to bring the muscles of the fingers or wrists into their utmost state of efficiency will be evidently utterly different from those by which we cultivate the muscles of the loins, the back, or the chest. For fingers and wrists are obviously designed (and are regularly used) for far more rapid movement than the muscles of the back, loins, or chest, and to attempt to make these larger muscle-areas work with the same rapidity as the fingers attain in piano playing, is to give not only an impossible task, but a most unsuitable one. Or again, to try to accustom the fingers to sustain the weight borne every moment by the muscles of the neck would,

even if it were possible, utterly unfit them for the rapid movements which are natural to them. Again, the muscles of the legs are designed to bear and to move the whole weight of the body, and it is thus obvious that exercises suitable for development of the arms may be highly unsuitable for the development of the legs, which from their greater natural bulk (designed for the continual shifting and sustaining of weight) are not able to move with the flick of the whip. And it is here also that dumbbells and indeed gymnastics generally seem to us to go wrong. It is to the arms in dumbbell exercise that all this slow weight-moving is assigned, while really the essence of gymnastics seems to be to treat the arms like legs, and let them bear the whole weight of the body either passive or in motion.

Thus it appears to us a truer and more sensible way of exercise to give each muscle, as far as may be, the kind of work for which it was intended: to give to the wrists, fingers, forearms, exercises of great speed, to give to the muscles of the legs exercises of speed certainly (but of less speed, since they are weight-carriers), of balance and of flexibility (thus enabling the body to start quickly in any required direction) and of sustaining power, to give to the big areas of muscle round the spine, abdomen, and loins exercises that will enable them to do more easily their pillar-like work, and allow the underlying organs of the body free play, to give to the muscles of the ribs and chest that power of expansion and contraction which will enable the lungs to breathe fully at all times, and in emergency quickly, so that when greater demands are made by the working body for supplies of oxygen, they may be readily supplied without a struggle for breath. And if these things are possible—as we entirely believe—we hold that the man who has attained them through exercise will be a greater debtor to exercise than he who can lift large weights with limbs required for other purposes.

One of the very best times for exercise, and also for most people the most convenient, is early in the morning before breakfast. The body is (or should be) fresh and untired, and by exercise it is given a good start for the day, and fortified against the congesting effects of the long sedentary work which must perhaps necessarily consume the greater part of the ensuing hours. On the other hand, some people habitually devote the freshness of the morning to brain-work, for the brain like the body should be fittest then, and one of the present writers always does his hardest brain-work immediately on waking, reserving his exercise for later. In any case, it is far better to take exercise on an empty stomach than after a meal, since in the latter case the energy of the body is largely occupied with the work of digestion, which will be imperfectly, or at any rate slowly, performed, if it is taxed simultaneously by other calls on it. Again, in order to give full and easy play to the muscles, as little clothing as possible should be worn, since they are thus unimpeded in the movements, and also because there is nothing more hardening and invigorating to the

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body than exposure to fresh air. The exercise itself will very soon warm the body, though perhaps at first those unaccustomed to exposure will find it wiser to take their hot bath or hot and cold bath before exercise, so as to start already warmed. But all those who are accustomed to have a cold bath, and feel no chill afterwards, may safely begin with the exercises, and reserve the delightful thrill of the water for afterwards, when they are even warmer from the exercise than they would have been on getting out of bed.

Be sure also that there is plenty of air in the room, for you will use more when you are exercising by reason of the quickened respiration. Your window, it is to be hoped, has been open all night. It is really a pity to shut it. Then stand before a looking-glass, so that you may, by the sight of the reflected movement in front of you, be sure you are doing it fully and correctly, and may the more easily fix your attention wholly and entirely on what you are doing. For it is by attention that you will acquire ease and facility till, as in learning a thing by heart, the movements eventually become, if not automatic, at least extremely easy.

THE VALUE AND NECESSITY OF PHYSICAL TRAINING.

BY CHARLES PELTON HUTCHINS, M. D., PROFESSOR OF PHYSICAL TRAINING, UNIVERSITY OF WISCONSIN.

PHYSICAL training is preventive medicine. It is often a matter of comment why the semi-civilized peoples have such magnificent bodies. The future of the tribe depends upon the powerful arms and the tireless legs. The daily hunt for food makes the exercise necessary to life itself.

Among the civilized nations, and especially in the cities, all the necessities of life and most of the things commonly desired are to be obtained in the neighborhood or near the car line. As we are always in haste we take the quickest and least laborious way to secure it. This all means that our heads save our heels. But at what cost? The answer so often comes that it is known before it is uttered: "Yes, I know I need exercise, but I have no time for it." How near-sighted is such a view. Of what avail are scholarship and affluence if one is to be constantly interrupted by the illness that overtakes most inopportunely. Yet, what precautions are we taking to avoid illness and give our minds a strong habitation?

The body is akin to a piece of machinery operated by a boiler and engine. Our mental training is the delicate mechanism that turns out the finished goods: the nervous impulses running through the lesser or sympathetic nervous system in conjunction with our voluntary thoughts are the belts for the transmission of power; our engine

is made of bone and muscle; our boiler is the digestive tract into which fuel in the form of food is introduced, burned, and converted into power.

We acquire the skill; our machine engine and boiler were in order when they were turned over to us; we put in coal enough, but after a while it does not burn properly, and our power gives out. The medical repairer is called in. He says combustion is not efficient, and orders the one relief—regular and graded exercise.

Exercise; yes, but of what sort and in what manner? This depends upon many things. In the first place it should not be in the form of work. Particularly is this true of the school girl or boy. Together with the physical exercise should go mental relaxation or change. Games will always take the mind from tasks; therefore, the outdoor or gymnastic games are admirably adapted for growing boys and girls. And those games and exercises are best which develop the three physical attributes: speed, endurance, and muscular skill. The physically proficient man is he who can make his body muscles respond accurately to his volition. Treat the muscles with as much consideration as the stomach, and those muscles will send a steady vigorous flow of aerated blood leaping to all those organs by which we live and are of value to ourselves and mankind.

By J. G. SCHURMAN, LL. D., PRESIDENT OF CORNELL UNIVERSITY.

IN the physical training of the youth, outdoor sports take the place in this country of the military service required in Germany.

When an intelligent man recalls the variety of our outdoor sports, and the number of youth who participate in them, he cannot fail to be impressed with their high value both as an innocent amusement and as an effective factor in the physical development of the rising generation. And, speaking for the colleges and universities, I am sure they have been an effective antidote for effeminate weakness, for low vice, and for foolish disorder and rowdyism. However strange it may sound to the critics, it is nevertheless true that athletics have made it possible to govern—because athletics have developed an esprit de corps—hundreds, yes thousands of students in a single university, year after year, without the help of jury, court, or policeman. If the critics abolished baseball or football we should implore them, in the interest of academic discipline, to devise suitable substitutes or restore these games themselves.

Baseball and football are the best outdoor sports we have for the American youth, and football is the most popular, not only among the youth, but among the American people themselves. It is a rough game; but taking account of the large number of people who play it—comparing them, for example, with the more luxurious motorists—the number of serious accidents and of fatalities is small. The game is

so stirring, it challenges so potently the play-impulse of young Americans, it appeals so strongly to the popular love of vigorous competition, it has in it so many elements of military discipline and moral training, it affords such a voluminous vent for huge masses of superfluous feeling and energy in players and spectators alike, which otherwise would seek and find an outlet in more dubious channels,—there is, I say, so much to be adduced in favor of the game that the criticism which has of late been hailed upon it will on impartial consideration be found to be, if not hysterical and frenzied, at least one-sided and unfair.

The game is rough; but roughness is no bad ordeal; even the Scriptures enjoin us to "endure hardness." The game is attended with accidents; so is every game, so is every form of human activity, and every form of idleness. Is the game unduly rough or unduly dangerous? Then let us remove the extra hazards by a modification of the rules. In my own judgment, the two greatest objections to football as now played are "slugging" and other intentional evasions of the rules for the purpose of weakening opponents, and the commercialism which grows out of gate receipts and the handling by young men of enormous sums of money for athletic purposes.

The first of these evils can be remedied by the enforcement of severe penalties for foul playing; not only disqualifying the offender, but penalizing his side. To that end the positions of the umpires must be rendered more independent, so that they will not scruple to do their duty, even when the stands are filled with the friends and supporters of the offending team. A few changes in the rules and in the provisions for their enforcement would accomplish all these reforms, except the elimination of commercialism. And that, I suppose, we must endure till the colleges and universities agree to abolish gate receipts. And gate receipts will not be abolished until some less objectionable way is devised of supporting athletics.

BY THOMAS ANDREW STOREY, PH. D., M. D., ASSOCIATE PROFESSOR
PHYSICAL INSTRUCTION, COLLEGE OF THE CITY OF NEW YORK.

IN physical instruction now-a-days we plan to teach each individual how to secure and how to keep a healthy body. Physical training is then nothing less than personal hygiene, and if the best results are to be obtained, must necessarily bring the individual at intervals into more or less intimate relationship with expert medical advice. The modern gymnasium is organized on this plan. Each member is given a critical medical examination. His "weak points" are found and reexamined from time to time. He is then given appropriate exercise, and is told why he does the work given him and what it will do for him. He is taught the importance of proper habits of eating, drinking, breathing, elimination, sleeping, bathing, rest,

and recreation. And his work is made interesting so that he does it not only because it is good for him, but also because he likes to do it. For this very reason it is of much greater benefit. Such work to be beneficial must be interesting.

In such a widely planned scheme of physical education each individual may expect to secure for himself the best development which is possible for his particular body to attain. All may expect better digestion and elimination, stronger hearts, better circulation, stronger and usually bigger muscles, stronger bones and joints, and deeper chests. Such people feel better. They are most likely happier. A strong, active, energetic young man or woman is usually of good appearance, with clean skin, bright eyes, and manly or womanly bearing. In addition the competitive games and sports that enter into the curriculum of physical education should develop courage, self-reliance, and an appreciation of "team work" in its larger sense.

Now it is a fact well known to medical men that persons who have secured the good results that I have enumerated, are not only more healthy, but they are far less liable to be sick than are those people who have taken no such care of their bodies. Teachers know that physical training makes better students—they think better, they think clearer and more quickly. Generals know that they make better soldiers, for they are stronger and have more endurance. Business men know that they make better employees. And all thinking men realize that they make better men, better women, better husbands and wives, better fathers and mothers, and better citizens. For these reasons public schools, preparatory schools, colleges, universities, factories, and cities build, equip, and carefully organize gymnasiums; for they appreciate more and more the inestimable value of healthy men and healthy women.

By C. F. E. SCHURTZ, DIRECTOR OF PHYSICAL TRAINING, PUBLIC SCHOOLS, BALTIMORE, MD.

PHYSICAL training means the education of the body, which is just as essential as educating the mind. The mind should never be developed at expense of the body as the body is really of greater importance, for without a sound body we can never become useful members of society. It is important then that every one should not only know how to develop the body, but how to take care of it also. The human body is subject to many changes during life, and it depends entirely upon how well the body has been educated and what care has been given it, especially during childhood. The human body has five hundred and twenty-seven muscles. I may compare the human body with an engine of many different parts; if the different parts are not properly taken care of, something will go wrong and break down, and unless the broken down parts are speedily

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repaired, the great engine with its many different parts becomes useless. So it is with the human body; if we do not give our different muscles the proper attention by exercising them regularly, the digestive organs will get out of order, some parts may break down and put the whole body out of use. So you see, my dear boys and girls, how necessary it is to properly and prudently take care of our muscles and develop them, so as to make them sufficiently strong to endure the use we expect of them, and fit us for life's work and duty. Our young people should know that all the intricate and delicate parts of this great human engine are in the upper body, and that we should, with the pride of the engineer, keep all parts well oiled to make them run easy and to the best advantage. They should also learn how easily these delicate parts can be abused. If the engineer does not understand how to take care of the many parts, his engine will not last long, however durably it may have been built. So it is with our body: we must study to know ourselves; we should know the use and abuse of all parts, and how to take care of the same to make them serve their purpose. We should know the functions of our muscles, so that we may know how to direct and divide the movements with a proper distribution over the whole body. We should learn that everything we grasp with the hands will develop the forearms, and the firmer we grasp the more beneficial the movement. When we bend our arms at the elbows, the muscles of the upper arms are brought into play, and if we grasp a horizontal bar, and try to pull ourselves up to look over the bar, which of course is quite difficult at first, but by repeated trying soon becomes easy, we at the same time develop about sixty different muscles. In raising the arms at full length, our shoulders are exercised, and by raising the arms in front, so that the hands are parallel with the shoulders, and swinging them quickly backward and forward, we are exercising the upper back and chest. To exercise the lower back and abdominal muscles we must bend the trunk backward and forward. Bending the trunk sidewise, right and left, and turning from one side to the other, we are exercising waist and hips. A very valuable and beneficial exercise is the holding of one's weight suspended by grasping a horizontal bar with a firm grip and trying to raise the legs to a horizontal position; to do this with both legs is very difficult and requires practice, so try one leg at first, right and left, and practice will bring perfection. Don't be afraid to run and jump with prudence; this will increase the lung power. Do all the exercises with proper precaution, as too much of anything is positively injurious; and last but not least, keep your body clean, as cleanliness is next to godliness.

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By WINFIELD C. TOWNE, A. B., INSTRUCTOR OF GYMNASICS, MASS.
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PHYSICAL training is the systematic development of the motor powers of the human body by means of gymnastics and athletics. Although it is not universally recognized as such, it is a coördinate department of education itself, so great is the inter-dependence of the mind and the body. Excellent physical development is necessary for the highest mental activity. A mere glance at the history of education will suffice to show that those nations which have attained the highest intellectual development have been those that have stood foremost in physical achievements.

The object of physical training is primarily to develop a firm healthy body, strong muscle, and pure blood. In systematic exercise every function of the body is engaged. The circulation of the blood is quickened, and the brain is relieved from the congestive tendency, caused by prolonged mental strain. More oxygen is inhaled, and the impurities and waste matters which would otherwise clog up the body are quickly burned up and destroyed. The appetite is increased, and the digestive organs are regulated. Physical training develops the power of action and thus economizes the bodily energy. It not only acts immediately on the state of the body and renews its forces, but it also tempers the nervous system, and gives the mind more vigor. Many of the indirect benefits are quite as important as the direct benefits, for in systematic exercise alone can relief be obtained for stooped shoulders, spinal curvature, and flat chests. In short it changes the whole physical appearance of the body.

Like all activities of man physical training has been most in vogue at those times when the conditions of life have demanded it. Present conditions, it seems, call for a more widespread interest than ever before. A hundred years ago less than four per cent. of the people of the United States lived in cities; while the rest lived in rural districts where everything is conducive to health. At the present time over sixty per cent. are crowded into cities, where the conditions as regards the maintenance of health are quite the opposite of those in the country. A century ago almost everything was done by manual labor, but now all this is changed, and steam and electricity have to a large extent taken the place of muscular energy. Transportation and communication are both rapid; in fact, all business is carried on at a whirlwind rate. This radical change from muscular activity to psychic activity makes a greater demand on the brain, and nervous expenditure is greatly increased. The advanced place that education has taken in modern life has emphasized the need of systematic physical training for the recluse. Clerks, students, and professional men live in a biologically abnormal atmosphere. They do their work in a sitting posture with the chest as a rule contracted. This position coupled with intense mental activity restricts circulation, respiration,

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and assimilation, and it is difficult to remove the cause. Physical training is necessary, therefore, to neutralize this effect, and also counteract the enervating influence of city life.

Systematic gymnastics, athletic sports, and out-of-door games are the forms of physical training which yield the best results. The kind of exercise and the amount which an individual should take depends upon the varied and changing need of his health and strength. It should be taken regularly, and not spasmodically, in order to obtain the best results. It is true that gymnastics and athletics, however diligently practised, will not make every man an athlete or eradicate all the physical evils of which he is heir, but it will bring out the best physical qualities that are in him and give perfect harmony between his mind and body.

BY A. K. JONES, Y. M. C. A., INDIANAPOLIS, INDIANA.

THE stress of this age demands men of virility and physical power. Inheriting a sound body, not imbibing toxic nostrums, will maintain the integrity of this delicate machine. Men are not usually ignorant of the laws of physical health and growth, but the lack of conviction in the matter is alarming. There is a general disregard of nature's requirements of resting periods, recreation, and diet. Physical recreation, in a proper environment, refreshes and strengthens every tissue and organ, and makes the man bound with new life and energy. Physical exercise is just as essential for the man of seventy as the boy of seven—the amount and nature of the work must be different. The old man should engage in walking, horseback riding, golf, croquet, etc.; the boy in lively and competitive forms of sport. It should be borne in mind that physical training involves many objects, viz.: health, skill, recreation, grace, symmetry, strength, endurance, expression, etc.

BY CHAS. V. P. YOUNG, PHYSICAL DIRECTOR, CORNELL UNIVERSITY.

MAN, it has been well said, is adapted to self-improvement by means of exercise. From infancy to old age, there is never a period in which the efficiency of mind or body, or both, will not suffer if deprived of a suitable amount of muscular activity. It may be said in general, however, that the vital importance of such activity decreases with each year of one's life.

Sensations are carried to the brain through the medium of the senses, which in the infant are very imperfect. They are strengthened and developed by use, and mental growth thus becomes possible. If any one of the five senses is lacking or becomes atrophied by disuse, the number of perceptions is lessened. So the converse is true, that

by proper care and training of the physical organism, of which the organs of sense are a part, these organs become better fitted to perform their several functions, and the number of perceptions is thereby increased.

All that is needed by the infant in the way of physical training, aside from the care that is essential, is opportunity. Freed as much as possible from the restraints of clothing, and placed upon his back, he will work his arms and legs about in sheer delight, apparently, at the power of movement. Soon, as the tiny limbs develop, he will begin to creep and crawl, and pull himself up to objects, tumbling about in delight, again, at the power of locomotion. As the novelty of movement from one place to another wears off, the handling of objects seems to furnish the incentive, and he experiments with them in all possible ways.

During the first six or seven years of the child's life, he should be allowed to grow and develop without any artificial aids, or hindrances, whatever. Simply furnished with instruments upon which to exercise his constructive instincts and unhampered in his play, no possible scheme of physical training is called for, and none should be attempted.

After seven years, play still occupies the most important place in child development,—more important by far than the formal school gymnastics that sometimes are made to serve as a substitute. During this period, games come to be of predominant interest, and take the form largely, evolutionists tell us, of stages represented in the earlier history of the race, stages in which the individual depended upon strength of arm or fleetness of foot, and upon ability as huntsman or fisherman, for his very existence. The boy or girl who has opportunity to indulge this instinct, reflective of earlier racial conditions and achievements, will be found to develop suitably. That they should do so is more important and will do more to insure a life of usefulness than any amount of book learning that may be acquired during the period, and parents should see to it that school work is not allowed to encroach upon play hours. Time seemingly lost, by observance of this rule, is in the long run time gained, for it means vigor of heart and lungs, and bodily skill, which are the foundation for future attainment.

After twelve, play need not occupy so large a place, and in case of defects of posture or carriage, prescribed exercises may more fittingly be substituted. However, every adolescent should engage in some form of muscular activity of considerable severity each day, in order to maintain a proper equilibrium between growth and development. Out-of-door exercise, if at all practicable, is always the best. It is interesting to note, again, that the games of this period are reflective of the combats of savage tribal life, so that the tremendous interest of the youth in athletic sports is more or less the result of instinct.

After the body has once attained its growth, and the larger part of

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life is confined to the more purely intellectual sphere, exercise, while important, serves more particularly as a means of stimulating body and mind to a high degree of efficiency. Very little change of an organic nature is likely to result. The man or woman, however, who by reason of occupation, or for other causes, ignores nature's demand for relaxation and recreation, at stated periods, cannot maintain life, either as regards its mental or physical aspect, in the highest state of intensity. The organs of respiration and circulation are the agents of supply and distribution, and their natural stimulation is physical exercise. In an active life, there is constant breaking down of tissue in brain and muscle, which, if not carried away, accumulates and gradually poisons the system. The inevitable result is that the mind's aptitude for work is decreased, the power of concentration is lost, the memory deteriorates, and a feeling of dulness and lassitude takes possession, all of which can be largely overcome by spending an hour each day, or even less, in enjoyable outdoor exercise.

In general, it may be said that all forms of exercise which furnish unrestrained and easy motions are preferable to feats of strength or endurance; that extreme specialization in any form, in the young, is to be avoided, because it overdevelops the parts exercised, and hinders rather than helps in the harmonious working of part with part; likewise excess of bodily exercise is a detriment rather than a help to mental efficiency.

BY JAS. NAISMITH, PROFESSOR OF PHYSICAL EDUCATION, UNIVERSITY OF KANSAS.

THE saying, that the educated man is one who knows something about everything and everything about something, might be changed so as to read, the physically educated man is one who can take part in every form of sport and who excels in one. The perfectly developed body is one in which all the structures are normally developed, and all the functions are working harmoniously.

The powers of the body do not come to us ready-made, but develop slowly, some early and some later in life; and they usually follow a definite order. Nature has given us incentives, which are almost instincts, to physical exercise in childhood and youth, that too at the time when each would do the most good. The best results in bones, muscle, and brain power can be attained by following the normal order of development.

The general order is in childhood the physical, and in adult life the intellectual, with a gradual dropping of the former and taking up of the latter. It is true that in many cases there is a tendency to remain interested in the things that pertain to childhood, neglecting to go on to those things that pertain to manhood. But this is not the fault of nature nor of exercise, but the fault of our civilization,

which allows many of the youth of the country to grow up without any sense of responsibility for their future maintenance. In the animal world, the stern necessities of life compel the individual to use those powers, developed by play, in the struggle for existence. And the one who had made most progress in play was better fitted for actual life than the one who had waited for this time to come, without the proper training. Too often in our educational systems this order is reversed, and the individual spends his childhood in drudgery, seeking intellectual development before he is prepared for it; and spending his life making a drudgery of recreation in the endeavor to acquire that health which should have been his from the start, and which would have made his whole life one of pleasure to himself and his associates.

But, by following the natural order, the greatest gain would have been achieved, both physically and intellectually; for the powers developed at the proper time are more lasting and more serviceable than those acquired at the wrong time.

It is necessary, then, that at the very earliest stage in the development of the child the greatest care should be exercised in the selection of his play and exercise. The parent or teacher should realize that athletics and sport form a temporary part of a man's equipment, a means to an end, rather than an end in itself. And that he should be developed, not for the purpose of making an athlete, but that he may be efficient in life, that he may enjoy his recreation and get benefit from his exercise, rather than the glory that comes with victory. Were this observed, we would find fewer weaklings in the grand stand, and a greater proportion of our population active participants in the games. There would be less tendency to specialize in some particular sport to such a degree as we find to-day, and we would more nearly measure up to the standard laid down at the beginning. The interest of the individual should be as wide as is consistent with the true aim of education, and with expertness in some one line. The young man who can take part in any form of athletics is more likely to have an evenly balanced ability, and feel himself at home in any company of athletes, while the specialist, in some one form of sport, is apt to have some one side of his nature developed at the expense of another, and feel sadly out of place when the company wish to take part in something with which he is not familiar. It is a sad sight to see some great husky fellow casting sneering remarks at some sport with which he is not familiar, and in which, by reason of his specialization, he is not qualified to take even a respectable part. At the same time, if there is no sport in which he excels, he is always following some one else, instead of being at some time a leader. He is apt to be lacking in a proper respect for his own powers and a proper amount of initiative. As he grows older, if he has chosen wisely, he will be more likely to devote some time to that sport in which he is interested.

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Our interest in a sport is something which is capable of being cultivated, and in the great majority is not inherent, but dependent on environment. We see again and again an individual who takes no interest in a subject, while he has no knowledge of it, becoming interested, to the point of being a crank, when he becomes an authority on that subject. It is no uncommon sight to see a boy becoming fascinated with a game that at first he despised, simply because, by some means, he became proficient in that particular sport. The majority of boys can be interested in any form of sport in which they can be induced to perfect themselves, regardless of the method by which this skill was acquired. Then if we wish our boys to be interested in any sport, or if there is any sport which would be the most beneficial to them, let us see to it that they become expert in that; and the interest will follow, so surely as effect follows cause. Therefore we should *choose* this event rather than trust to luck or environment to determine what shall be our future form of recreation. It is well worth while for a boy to stop to consider which sport shall be his specialty; and any father should count it a privilege to spend time helping his boy to decide this question.

In order to settle this question properly it is necessary to have some standard by which to judge the value of a sport, and the following seems to me to aid in this matter:

1. It should be a sport which develops the right type of man, not the heavy slow type, nor yet the excessively nervous, but that which, along with health, develops skill, agility, erect carriage, physical judgment, self-control, concentration, and courage.

2. It should be such that it can be played by a few, for then we are not dependent on a crowd, and a few can enjoy a game. The older we get the harder it is to get some one to enjoy our sport with us.

3. It should require little apparatus, for, when there is too much equipment, there are few who will go to the trouble to prepare for the sport; and our sphere will be limited, and our opportunities few.

4. It should be such as will attract us after our business occupies our time and attention, for it is then that we especially need the recreation which comes from a good game.

5. It should have the element of sport in it, and this should not be entirely dependent upon competition, else when competition ceases, or we reach the class of the "also rans," the attraction of the game is gone, and we care little for it.

6. It should have the minimum of danger to life or limb which is consistent with the development of courage.

7. It should not make too great a strain on the endurance, nor demand too great an amount of training, for when the real business of life is upon us we cannot take the time to train, nor stand the strain which is placed on our vital organs.

No one fulfils all these conditions, or is alone sufficient for the full development of the individual. But some come nearer doing this

than others, while sometimes a combination of two or more rounds out the individual.

The more common games might be graded as follows: volley ball, handball, golf, tennis, rackets, boxing, and fencing. The more strenuous might be graded thus: field athletics, basketball, association football, lacrosse, baseball, football, track athletics, and rowing.

In early life we might select one from the first group, which would develop, principally, skill, agility, and physical judgment; in the heyday of youth we might choose, from the second group, one that would tax our self-control, concentration, and courage; while in later life we could return to one that uses the skill acquired early, thus getting a maximum of recreation with a maximum of intellectual effort.

BY CHAS. B. LEWIS, PHYSICAL DIRECTOR, TUFTS COLLEGE, MASS.

PHYSICAL training is another important item in the process of strengthening the body, and is indispensable to health. It is a well-known principle in physiology that the reasonable and regular exercise of any part of the human body will give strength and power of endurance; for instance the muscular system, which depends greatly upon regular exercise for its power to perform the work assigned it. A good muscular development not only gives strength and rapidity of motion, but promotes the circulation of the blood, which is essential to a healthy body. If the body is inactive without muscular power induced by exercise, the muscular system becomes flabby and powerless. The vital processes are weakened, the person becomes pale, the flesh soft, energy fails, and excretory organs cease to perform their proper functions.

Health is the result of harmonious action of the processes of respiration, circulation, digestion, assimilation, and elimination. Consequently it will vary with the degrees of vigor and harmony with which these processes are carried on. It is the condition of the involuntary muscles that determines the degree of health.

If these muscles are strong and active, vigorous health is assured to their possessor. This strength and activity will not continue of itself; it requires frequent reinforcement, and nature has wisely arranged that it shall be supplied by action of the voluntary muscles. Therefore every voluntary act in any part of the body, whether it be work or play, intentional or unintentional, contributes to this end.

The object of taking physical exercise is to develop the lacking functional power of one or more of the vital organs and functions which are deficient in this respect, and this deficiency varies in different individuals both in regard to its location and its degree of variation from the normal. It is impossible to form a schedule suitable for universal use. Both the selection and order of arrangement of

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exercises must be decided by individual needs, otherwise they will not prove especially helpful, and may be productive of harm.

What these individual needs are depends upon the defective conditions of the system which have either been inherited or acquired. But whether inherited or acquired, there are forms of remedial exercises, which if begun in time and intelligently used, are able to correct and improve them.

A fault in physical training is overexercise. This exerts the muscles beyond their power, and finally causes their destruction. Thus the muscle, instead of growing through exercise and increasing in strength, dwindles away, and finally loses all its power. Moderate and regular exercise, with proper nutrition, strengthens the body. Deficient exercise, or none at all, prevents natural development of the organs, depriving them of their ability to perform their functions; overexertion, too violent exercise wears out the tissues too rapidly, not giving nature time to repair the waste.

"Health is the vital principle of bliss, as is exercise of health."

Therefore it is evident that physical training is one of the essentials for maintaining and promoting health of the human body, without which the other means heretofore mentioned would fail, or at least produce only a partial result.

BY J. B. FITZGERALD, M. D., PHYSICAL DIRECTOR, BOSTON PUBLIC SCHOOLS.

ONCE in this world, long, long ago, there lived a people who did not think of mind and body as separate facts to be treated separately, but as one fact, one entity, always to be considered together. They believed that mental processes were physical processes, and the reverse. They believed that the physical was first in point of time, of importance, and was the foundation. They expressed this idea in their system of education, and they lived it in their lives, and the results all men know.

In spite of this, their ideal shared the common fate, and went down in the blackness that followed the fall of the Roman Empire. How far it fell may be judged by the fact that in the Middle Ages and later, exactly the opposite conception of education and of life was held. Life was not something to be lived nobly, to be enjoyed wisely, and what education there was, or came afterwards to be, concerned itself wholly with the mind.

It will be admitted some day, I think, that one of the glories of the nineteenth century was the rebirth of the ancient idea, or ideal, of education. It still has far to go. It will be long before it will win back the old esteem it has held. It is sneered at still in many high places. It is accepted only half-heartedly, or less, in many others. Its converts, after the manner of converts, have committed excesses,

but the conception is so noble, the results so great, that men will never consent to give it up again.

How far we are from the ideal is well illustrated by a very popular book published a few years ago.

In the first story, "Beside the Bonnie Brier Bush," George How is permitted to realize his ambition to go to college. Education to George, and apparently to every one about him, meant books, books and only books. To such good purpose did he study them that he, the child of poverty from the glen, carried off the prizes in both the classics and the humanities from the sons of some of the oldest and proudest families in the land. Having performed this wonderful feat, and having, of course, neglected his poor body while doing it, George went, strange to say, not forth to conquer the world as well, but home to die.

It is a fact that the writer, in all the discussions he heard regarding the story, heard much of its beauty and pathos but absolutely nothing of the supreme folly of the whole performance on the part of all concerned. And yet, that seems the most obvious thing about it.—Literally, to educate a man to death.

However, just as the blood of the martyrs was the seed of the church, the spectacle of the failure of those who do not recognize the primary importance of bodily exercise, of physical education, has been and will be the most potent factor in the spreading of this new and old gospel.

What, in a word, are the results of the harmonious development of the body, including the brain?

Health.—Not the dull, negative feeling which is the lot of most, which is perhaps merely freedom from pain which lies on the borderland of disease with more or less frequent incursions therein, but the positive, sparkling, overflowing health which laughs at germs and maladies, which is a blessing to its possessor and every one else, because by its radiating power it is, in the best sense, contagious.

Happiness.—Above the door of the Brookline Public Baths is the inscription, "The health of the people is the beginning of happiness." How can one be happy unless he is well, and how can one be utterly miserable if he is well? Certain it is that perfect health enables us to bear sorrow and misfortune with dignity and fortitude.

Power.—How many men and women have failed in reaching the goal of their ambition because at the critical time, sometimes at the very outset of their careers, as in the case of "Geordie How," not will, not longing, but heart or brain, stomach or nerve, fail them. How many?

Beauty.—So far have we fallen that nakedness, the human body as God made it, has in the minds of many become synonymous with nastiness, with shame. It is true, of course, that poets and painters, who are in a sense prophets, and a few others, do not believe this. They believe in the dignity, the beauty, and the glory of the human

form divine. I must admit that the Philistines have the best of it to this extent that the majority of human bodies are not things of beauty. They are shameful things, which the owners of them do well to keep covered. It is probable that a more general diffusion of physical beauty among mankind must precede the general acceptance of the poets' and painters' ideal.

The chief ends then, of physical education, are Health, Happiness, Power, and Beauty.

DIET AND STIMULANTS.

BY

E. F. BENSON AND EUSTACE H. MILES.

DOGMATISM on any subject is dangerous; in matters of food it is fatal. One man's meat is literally another man's poison, and because one of the writers knows that personally he can digest without the slightest discomfort a heavy supper, sleep the sleep of the just, and rise cheerful and hungry for breakfast, he would be making a great mistake in recommending such a course for a dyspeptic person, with a view to the strengthening of his digestive processes. In fact, if a naturally dyspeptic person persevered in such a system, this unfortunate scribe would probably be summoned to attend—with shame and dishonor—a coroner's inquest. On the other hand, should the dyspeptic so far win him over as to make him give what he would call a "fair trial" to a simple diet, "the only diet," he would say, "on which it is possible to keep fairly well," he would, if it was persevered with, be probably asked in a public place what he knew about this suicide. But the moral of these gloomy reflections is clear enough: namely, that in questions of eating, and drinking, and smoking, what is to be ascertained is the diet which will keep A or B in good health for the proper performance of a citizen's duties. Whatever diet (or absence of diet) continues to give good results after a protracted trial is almost certainly good for the individual in question. Whether it would be good for another individual it is impossible to say, but if any one person, even though he lived exclusively on green cigars and Egyptian mummies, continued to be in his most excellent health on such a diet, it would be foolish to urge him, except on the score of expense in the way of import duties, to change it.

But the majority of people are not at their best, and know it. When they are in hard work which, as far as we can see in the present highly competitive state of the world, is becoming the normal condition for man, their bodily health, and in particular their bodily activity, sensibly declines. Then perhaps there comes a lull, and they

From "Daily Training," London. See note, page 387.

rush off into the country to be out of doors all day, and play games, or shoot, or hunt, and get sensibly better. They have more appetite for food, and as a natural consequence digest it better, since wholesome appetite is a fair enough signpost pointing to the pleasant place called "Eat." Then the lull ceases; they go back to work again, with a gradual decline of appetite. At these cross-roads, so to speak, for the most part they take the wrong turning, and continue to eat as much as before. Horrors ensue.

The fact is that most people when taking a great deal of exercise are able to digest, and, what is not less important, to assimilate, not only larger quantities of food than they can assimilate when in full sedentary work, but a different sort of food. As a rule they know of only one change of diet, alluded to contemptuously as "vegetarianism," and connected in their minds with huge platefuls of damp cabbage, of which the most valuable salts have been boiled out and thrown away by an ignorant cook. They are further "put off" by what appears to most people preposterous notions about the sin, no less, of eating animal food. In fact, bad cooking and tactless enthusiasm have hand in hand done their utmost to ruin the vegetarian cause. To eat damp cabbage can be, by no conceivable process, good for anybody, and to shun animal food because it implies death to an animal is a motive which does not appeal to the majority, who, without examining any possible truth it may contain, label it a fad. And there is nothing which in the minds of ordinary people, who most naturally and sensibly do not wish to spend the whole of their lives in discovering the diet which best suits them, is more strongly prejudicial to any examination of a new system than to suspect it of being faddy. They naturally desire a *régime* of which the common-sense appeals to them, and the common-sense of that which is ordinarily called vegetarianism is far to seek. Many people have found that the amount of meat which they usually eat is not very good for them: that three flesh meals a day are excessive in the way of animal food; on the other hand they must have something substituted for the meat, and they turn to vegetarianism, and perhaps try a meal at some vegetarian eating-house. One of the present writers tried it. For an hour or rather less he felt that he would never eat again as long as he lived, then, almost without transition, he felt that he wished to eat the whole world round. And he fled back to the fleshpots of Egypt.

But nowadays vegetarianism is studied by certain people in a spirit of scientific investigation, and its results, rationally arrived at, are likely to prove of the most permanent value. It is the greatest possible mistake to suppose that all vegetables and fruits are equally supporting; some are highly nutritious, others are hardly nutritious at all, and to load the stomach with immense masses of a food which has a low nutritious value, in order to get sufficient nutriment, will probably produce results on health worse even than those from which

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the man who found that he was taking excessive quantities of animal food tried to escape.*

Briefly, then, the scientific view of food in general is as follows.

Food has to supply waste of tissue and make repairs.

Food has to supply heat (fuel for the continual combustion of the body) and a certain amount of fat.

Food—so it is usually asserted and largely believed—has to give the stomach a certain amount of fibrous matter to supply bulk which will enable the system, by natural means, to cleanse and flush itself internally, and throw off the waste for which it has no use, but which exists in greater or smaller quantities in all foods.

Incidentally, also, food should be of such taste and nature as easily to excite the saliva, which is almost indispensable to procure digestion.

Now the one great necessity without which we die is proteid, because proteid supplies (and nothing else in the world supplies) the waste which daily and hourly goes on in the body. It is present in conveniently large quantities in all meat foods, which is one of the main causes of their being eaten, but it is present also in large quantities in cheese, milk-proteid, grains, nuts, and pulses, though in certain other fruits and vegetables it is almost completely absent. It would be practically impossible, for instance, to eat enough cabbage to supply the necessary amount of pure proteid per diem, which must, and this is important, not only be swallowed but be digested. On the other hand, it is easily possible to get enough proteid per diem by a meat diet, but it is even easier to get enough from a diet of grains, nuts, pulses, and milk-proteid,† provided the right sorts are eaten.

The abridged table on page 389 giving values of certain common articles of diet both in proteids and also in fattening and heating products will make this clear.

As to drink and stimulants more regard if possible must be paid to what we have called "the personal equation" than even in matters of food. Excess of everything—for such is the implication of the word itself—must be bad for everybody, but there is no earthly foundation for supposing that what is excess for one person injures another in the very least. A shower of rain ruins a picture-hat in a few moments: the same shower does not practically injure a locomotive engine at all, and is absolutely good for sprouting corn. Alcohol, for instance, if indulged in at all by one man, will assuredly lead either to excess or to inordinate craving for it, while another man will drink wine at lunch and dinner for years without ever feeling the

*"Many men are attempting to carry the diet of youth on into middle life and age, or the diet that was quite correct for an active outdoor life into a life of sedentary office work in a town; or if they fall into neither of these errors they are generally completely ignorant with regard to the relative value and importance of foods, so that they either starve themselves on vegetables or herbs containing little or no albumen, or, on the other hand, overfeed themselves. . . ."—Dr. Alexander Haig.

†For the question of milk-proteid in general see "Text-book of Physiology" (Schäfer), Vol. I., page 185.

slightest desire to increase his usual quantity. What he drinks, again, would hopelessly disagree with, or perhaps intoxicate another man, while it seems as far as we can judge to suit him; he would perhaps even be definitely less well without it. It is on this point that preachers of total abstinence, just like vegetarians, are often their own worst foes. They seem to regard the process of fermentation (a natural one after all) as productive of something which is in itself immoral. Drunkenness, of course, is a vice; we all know that; but so, and certain teetotallers seem to forget this, is gluttony. They

TABLE OF FOOD VALUES.

Foods—uncooked, unless otherwise stated.	Proteid.	Fat.	Carbo-hydrates.	Salts.
Beef (with moderate amount of fat).....	20	1.5	..	1.3
Mutton (with moderate amount of fat)...	14.5	19.5	..	0.8
Pork.....	12	26.2	..	1.1
Fresh fish.....	10.5	2.5	..	1
Milk.....	2.3	4.	4.5	0.7
Plasma.....	69	..	..	8.5
Cheddar cheese.....	33.4	26.8	..	8.9
Eggs (white).....	12.6	0.35	..	..
Eggs (yolk).....	16.2	31.75	..	..
Hot water bread.....	2.9	1.6	42.8	1.2
Wholemeal bread.....	6.3	1.2	44.8	1.2
White bread.....	6.5 to 8	1.0	51.2	1.0
Boiled rice.....	5.0	0.1	41.9	0.3
Macaroni.....	10.89	0.45	70.05	0.64
Dried peas.....	21.0	1.8	55.4	2.6
Lentils.....	23.0	2.0	58.4	2.7
Haricots.....	23.0	2.3	55.8	2.2
Potatoes.....	1.2	0.1	19.1	0.9
Turnips.....	0.9	0.15	5.0	0.8
Onions.....	1.6	0.2	6.3	0.6
Cabbage.....	1.8	0.4	5.8	1.3
Tomatoes.....	1.3	0.3	5.0	0.76
Cucumbers.....	0.81	0.1	2.1	0.4
Apples.....	0.4	..	12.5	0.4
Plums.....	1.0	..	14.8	0.5
Cherries.....	0.8	..	8.9	0.5
Strawberries.....	1.0	..	6.3	0.7
Bananas.....	1.5 to 3	..	22.9	0.9
Lemons.....	1.0	..	8.3	0.5
Dried dates.....	4.4	..	65.7	1.5
Dried figs.....	5.5	..	62.8	2.3
Chestnuts.....	10.1	10.0	..	3.7
Walnuts.....	15.6	62.6	7.4	2.9
Sweet almonds.....	24.0	54.0	10.0	3.0
Cocoa bean.....	6.3	50.44	4.20	2.75

each of them turn man into a brute beast, though what many teetotallers would look approvingly at as "a good hearty meal" appears to us to partake fully as much of the nature of debauchery as does the drinking of a bottle of champagne at dinner. The question of drinking, in fact, seems to us one that each man must settle for himself, by finding out experimentally whether he needs stimulant or not. Probably the healthier he is the less he needs it, and to spur a horse that is already going as well as the rider has any right to expect is both a cruelty and a false use of energy. It seems certain, also, that

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most people who take stimulants at all take more than they really need, partly because of the pleasant effect of stimulant in the heightened vividity it gives (leaving anything like drunkenness out of the question), and because of the taste of alcoholic beverages, which nine out of ten people find most palatable. Here again preachers of total abstinence put forward an argument so silly that it is scarcely worth combating (were it not for the fact that it is so often repeated), when they say that what we have called "heightened vividity" is the thin end of intoxication. It is nothing of the kind. Food itself is a stimulant as well as a nutrient; a mutton chop or a welsh rarebit when one is hungry gives heightened vividity; so also does whisky and soda.

But, and here we tread more sensible ground, it must be remembered that alcohol is *not* a nourishing stimulant, and that its effect quickly wears off, leaving reaction, however slight, in everybody. Nor must we keep out of the question what the continued effects of alcohol are. Its bad results may not be apparent for a long time. In certain cases there are bad results; in certain other cases apparently there are none. Authorities on training are universally agreed that very little, if any, should be taken when the training has begun; and they are unquestionably right, because the object of training is to produce before a certain date or during a certain period a specimen of manhood at its highest possible physical level, strung up and maintained at concert pitch. To do this the whole structure must be sound, and stimulant then appears to be of the nature of a temporary prop, which has again and again to be set up afresh. Also, repeatedly applied stimulant followed by repeated reaction is not ideal.

The same remarks apply to the ordinary individual in a less degree; for though he should aim at ideal health, he does not want the sort of health which a boat-race crew want. In fact, in a necessarily sedentary life it would be exceedingly inconvenient to him; for to maintain it it seems necessary to have hard daily exercise; quantities of open air, and hours which are practically impossible for the ordinary man who has to do his daily work. An abstemious man who has been accustomed to alcohol may easily, if he drops its use altogether, find himself continuing to desire it, at an expense of nervous fretting which will cost him more than the possible gain in health may be worth. But when any man who takes alcohol finds himself desiring it more and more and in increased quantities; if even at one meal, let us say, he is unable to get it, and finds himself fretting for it, we have no hesitation in begging him at whatever cost to drop it altogether and at once. We do not say he is on the highroad to become a drunkard, but somewhere ahead of him there easily may be that highroad.

Here comes in the question of the general regulation of drinks, which, theoretically, we are afraid, is a most uncomfortable gospel. For the effect of drinking cold things during a meal, except in very

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small quantities, is without doubt digestively criminal: since the result of pouring cold aspersions into the stomach while it is busy with digestion is to lower its temperature at the time when heat is needed, and also to weaken and water down the digestive juices.* There is no getting over this: long drinks on hot days at lunch are not to be recommended. But even here the baffled voluptuary may find a way out which is not so disagreeable. He may by all means have his long drink half an hour before lunch, or at a rather longer interval after. If he choose after, he will find, especially if he has eaten fruit at lunch, that he does not want it, and that though the satisfaction of a real throatful of cold liquid is denied him, he will have taken during lunch quite sufficient liquid to satisfy his thirst.

THE CARE OF THE TEETH IN RELATION TO HEALTH.

BY

OSCAR HOMBERGER, PH. G., D. D. S., ETC.; FORMERLY DEMONSTRATOR
OF CLINICAL DENTISTRY IN THE DENTAL DEPARTMENT OF THE
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NOTE.—Physical education, as the reader will have learned from the many Contributors to this Section, is not, as many have been accustomed to think, a mere training of the muscles. It covers the proper care of the whole person, and it is part of a proper Physical Education to know how to take care of one's teeth, for, as the following article shows, health, strength, and beauty depend to a very large extent upon this being done.—[C. W.]

THE teeth should be examined and thoroughly cleaned three or four times yearly. (In extreme cases even oftener.) No person is able to thoroughly cleanse his own teeth. If food is permitted to remain between or on the teeth the action of bacteria converts this débris into lactic acid and other products. This, together with the tartar (a hard bone-like substance) which is deposited about the necks of the teeth, by the action of the saliva, causes recession of the gums, and so lowers their vitality that the disease germs which are to be found in all mouths, whether healthy or otherwise, are enabled to bring about effects ranging from very slight to intensely serious conditions such as the loss of all the teeth and other evil results.

Furthermore, the lactic acid dissolves out the cement-like substance between the rods of enamel in the teeth, causing them to fall out, and allowing the various bacteria of disease or decay free access to the inner structure of the teeth. The individual then swallows increased quantities of the said bacteria. These have a directly bad action upon the general health. The white blood cells have as one of their functions the killing of disease-producing bacteria. Up to a certain

*On the excitation of the gastric juices by digestion only, see Schäfer, "Text-book of Physiology," Vol. I., page 349.

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limit they can do this. If, however, the quantity of bacteria becomes too great for the white blood cells to triumph over them, diseases result.

When it is borne in mind that one of the principal bacteria concerned in the decay of teeth is the bacillus of diphtheria, the serious results that follow on neglect of the teeth may be understood. It is not the intention to convey the idea that diphtheria may result from neglect of the teeth, but it is true that a general lowering of vitality may result from this neglect, thus causing a predisposition to disease in general, and if diphtheria is contracted the disease may be worse on account of the condition of the teeth, and the presence of the additional diphtheria bacilli.

Another result of neglected teeth is that the pain incident to mastication prevents this function being perfectly performed, and indigestion and malnutrition result. Finally, where the patient has permitted his teeth to abscess, a general fever almost always results, and it has even been known to produce general blood-poisoning, and cause death. Still another fact of particular interest to the physical culturist is that pain causes nervousness, and consequent loss of vigor, and this condition is much accentuated by the general lowering of vitality which has been previously mentioned.

As has been shown then, it is extremely necessary to take proper care of the teeth. Now what is meant by this? Every person should clean his teeth at least twice daily (before retiring and after rising). For this purpose we use a brush of medium bristles, and a good tooth powder, which contains no grit. Likewise use a good mouth wash to harden the gums and keep them healthy. The following has been used successfully for years:

R Hydro-naphthol	15 gr.
Alcohol	1 oz.
Glycerol	1 oz.
Aqua Dest.	1 oz.
Sig.—15 to 25 drops to a half-glass of water, used as a mouth wash from two to four times daily.	

If needful, a piece of floss silk should be used between the teeth. Never pick at the teeth with pins or other sharp instruments. If fillings or extractions are needed, they should receive attention without delay, as the pain incident to a dental operation is practically non-existent if the case is treated in time; when the patient delays his visit to the dentist until he is in pain, he cannot expect the dentist to do his work painlessly.

A great mistake, which is made by numbers of persons, is to give insufficient care to the temporary teeth of children. They should be cared for with exactly the same solicitude as the permanent set. If the temporary set is not given attention, the second set will suffer for it. Never allow a decayed temporary tooth to remain without having it filled, as the decay is very likely to travel downward and infect the permanent tooth forming below. When a tooth cannot be saved

by the dentist it should be extracted at once, but never have a tooth extracted until it is necessary, as irregularities often result from this, and mastication is made defective, causing dyspepsia and malnutrition. Because the public is more careless with the teeth of children, the latter are the greatest sufferers from toothache and the other troubles just referred to. On the other hand, if temporary teeth are allowed to stay in too long, irregular teeth are sure to result. To tell just at which age each tooth should be extracted would make this article too technical, but if the dentist is visited as often as advocated here, he can tell when this should be done.

In closing, special stress must be laid on the importance of having the teeth regulated at an early age. If the teeth are irregular, a regulating device should be made and worn not later than at the age of 13 or 14. In this way the result may be accomplished with the minimum of effort. When the patient is older the teeth are more firmly in position, and an attempt to move them is far less likely to be perfectly successful.

THE INFLUENCE OF TRAINING ON MIND AND MORALS.

BY

E. F. BENSON AND EUSTACE H. MILES.

IT is impossible to make the simplest movement of any kind without the conscious or unconscious direction of the mind, so inextricably are the two bound up together; and from the earliest times physicians, both spiritual, mental, and physical, have known that the soul can be reached through the "subtle gateways of the body." This aspect of training, the importance, that is, of the cleanly health of the body, and its prompt and unrebelling obedience to the will, which is concerned with this question, has been alluded to before, and is dealt with more fully here.

Many people hardly know what real attention means: there is no better way to teach it than to make rapid and correct movements, which cannot be made without it. In the same way, also, these exercises give the habit of control. A man who has brought mind and body into the relation of master and willing servant, even in so elementary a matter as this, is going on the right road to teach himself control in the largest choices and difficulties. So, too, in other points of training: a man who has made himself able to drop smoking, or abstain from stimulants, or from certain sorts of food which he likes, but which his reason tells him are bad for him, has not improved his power of self-control in that point only, but has begun, at any rate, to form a habit of it; and the exercise of self-control, in one point only, will make his power of control stronger all

From "Daily Training," London. See note, page 387.

round, in each and every case where his reason suggests control to him. It is here, as a tonic to the mind, that training of some sort, apart from all its other uses, is recommended to everybody; not training for some special event, which, as soon as the event has come off, is dropped, but a daily and continual observance of certain rules of health, a daily practice of exertion of will and obedience of body.

Again, the health of the body contributes directly to the power and strength of the mind. Work, which is irksome and comparatively badly done by a man who, for any cause, digestive or otherwise, is in only moderate health, will be done by the same man with zest and far better results if he is in good health. Also, the mind is able to accomplish not only better work but more work, when the whole system is not laid under a general tax to repair and make well any enfeebled or clogged organ. A single rusty joint, a badly fitting valve in an engine, makes the whole run less smoothly than it should, and also implies a waste of energy. Body and mind together, working in coöperation as they always must, are a close parallel to this. The one cannot possibly be at its best unless the other is in health. Rightful activity in the one stimulates activity in the other, just as artificial stimulants, such as spirits to the body, induce a mental activity in all respects like the physical one, temporary in character and followed by reaction. But the habit of briskness, of activity, of quick decision, is a thing fully as much mental as it is bodily; the two are inseparable, and, therefore, in the training of the body, the qualities which we should aim to acquire are those which are mentally desirable. One man's mind may, it is true, be naturally a much less fine instrument on its own level than his body, and much less easily trained, but the self-control, the alertness, the habit of speed, which such training as we have sketched out gives, will directly and inevitably affect his mind. It may still be slow and laborious in its workings, but it would otherwise have been slower. Also, whatever work it does it does better, because it is not clogged, hindered, and distracted by an unhealthy body.

Now this interweaving of mind and body is so complex, so closely knit, that it would perhaps be beyond the sphere of safety to say that the knitting together of the body and that within us which is the spring of moral, not intellectual qualities, the soul in fact, is closer than that of the mind and body. In any case, the interdependence of body on soul, of soul on body, and of both on the mind is practically complete, and this human trinity makes up man. There is no healthful habit of body which does not directly exercise a healthful influence on the soul, no harmful habit which does not hurt it. The body sins, and in its secret place the soul sickens. From the other side, also, a high moral standard infallibly leads the body to adopt healthy habits, a low moral standard suffers it to drift into physical crime and degradation.

Now city life, especially to any one who has been accustomed to

have a good deal of exercise without a modification of the food and stimulants he may take without hurt in a more active country life, is apt to put the body into a state which renders it particularly liable to all kinds of moral attack. The life is largely sedentary, and in consequence a great deal of physical vigor in young men, which would in the country be naturally and healthily expended in games and exercise for the one class, in manual labor for the other, remains unused, and, except to those of strong moral principle, is a dangerous thing. Again, without modification of diet to suit the circumstances, most people eat more stimulating food than they require, and, as a natural sequence, drink more stimulating and intoxicating drinks than are good for them. This, in itself, is another exciting cause to the passions. To exercise self-control under these circumstances is a laudable and a difficult thing; but a far simpler remedy lies to hand—namely, in not letting these circumstances exist, by deliberately taking less stimulant and deliberately stinting oneself in the matter of food, or giving a fair trial to the simpler foods spoken of before, which will be found to be far less exciting, though quite as nourishing. There are many men who are capable, as far as will power goes, of limiting themselves in this manner, who, if they do not limit themselves, become nearly helpless in the grip of their temperament. For a life of sensual indulgence, to put it on the lowest grounds, is bad for the body and the mind; sensual thought even becomes a habit as hard to get rid of as any morphia habit, and for many to try to rid themselves of it, while they continue to keep their bodies in a permanent state of excitability owing to overmuch food and stimulant, would be like attempting to cure the morphia habit, and yet continually going about with a vial of it in the pocket. And nothing, again putting the question on low grounds, is so bad for the nerves as to be incessantly desiring and dwelling in thought upon a certain thing, and incessantly refusing to gratify the desire. We do not, of course, mean that it would be better to gratify it, but that it is better to take hold of it by the root, not merely pinch the stem, and, as far as possible, get rid of the desire. For there are certain temptations, and impurity is one, which are not safe to fight consciously, since to approach them even in thought means to be seized, as it were, by the tentacles of some infernal cuttlefish. Do not school yourself to fight them; school yourself to run away from them. Interest yourself in other things, tire yourself physically, and, above all, do not indulge in stimulants of food and drink, which, however innocent they may be in themselves, predispose, by the very feeling of vigor they give, to things which are not innocent.

It is not only the suddenness and almost overwhelming force of physical temptation to some natures which constitutes their only danger, it is the gradual, hardly observable nature of the effect of such indulgence. For years, it is no use denying it, a man's mental and bodily health may continue, as far as one can see, absolutely

unimpaired by such excesses. The greatest harm is done by preachers, schoolmasters, and others who warn boys that such habits will lead to immediate decay of the mental and physical powers, and early death. The boy may be frightened for a time, but if this is the only preventive that keeps him back, his fright will wear off, and he will find by experience that no such effect, as was predicted, follows. He will, therefore, probably conclude that there is no ill-effect. He will, also, assuredly meet men who tell him that such practices are good for the health. A greater fallacy was never invented by the devil himself. There is no truth whatever in it. But what his teacher ought to have taught him was that such practices are the cause of mental and physical decay in thousands, though not immediately; that to yield to such temptations is for every one to become less able to resist them, and that by perfectly simple rules in the use of water, in the limiting of food especially, for instance, late in the evening the force of such temptations becomes infinitely less. Many people, no doubt, will say that this is a low ground on which to build up high motives. It is for that very reason, since it will appeal to those to whom high motives would not appeal, that it is so extremely useful. Thus it will appeal to many to know that at the age, let us say, of fifty, a man who has lived purely is, almost without exception, a stronger and more vigorous person, more capable of work and also of enjoyment than one who, in early manhood has, though possibly for a few months or weeks only, behaved like a mere "brute beast."

Too often, a young man gets away from his work, say at five or so, and what in heaven's name is the poor vigorous thing to do with the hours that divide him from his natural bedtime? * It is out of the question to expect that he should sit in his room and read a book; he has been at work all day; his body tingles for diversion. Out he goes, if he is human at all. In the general way there are two places open to him, the public-house or the streets. There his vigor finds further stimulus, or unhappily, its satisfaction. The sort of thing that is needed to work off the potential violence of the body is violent exercise. [The work of the Y. M. C. A., which is dealt with elsewhere, has been of incalculable benefit to our American youth in furnishing means of such exercise.—C. W.]

*"In the earliest times of the human race . . . to prompt people to take exercise meant only to induce them to do their daily work. In later times, however, and especially in the world of to-day as we know it, the multiplication of industries has placed many classes in such a position that exercise is something independent of, and has to be added on to, their daily employment. . . . The clerk at his desk and the merchant at his counter; the tailor in his crooked position, and the milliner at her seam; the printer setting up type from morning till night; the workers, or rather watchers, at manufactories . . . have one and all forgotten that their lower extremities are meant to carry them about. . . . Every departure (from the physically active life) may be an intellectual advance, but a muscular retrocession—a social gain, but a physical decline. Such being the case, it is evident that a great change either in the physique, or in the means of obtaining exercise so as to maintain that physique, must have taken place; and when we come to look at it we shall find that *but few of the employments of the present day carry with them a sufficiency of exercise.*"—Dr. James Cantlie, in "The Book of Health."

It is these evening hours which are the dangerous time. Purposeless loafing in the streets, though entertaining enough, is not sufficient for a vigorous young body, which has been pent all day at work; while loafing with purpose, we may say, is not good for anybody, yet it is to loafing with purpose that purposeless loafing naturally leads. Purposeless loafing is innocent enough, but, to use the morphia simile again, it is as if the sufferer from the morphia habit took a bottle of morphia and continued to finger it, a highly dangerous performance; and we do not believe that the class which loafs in the streets, anyhow the best of them, loaf because they prefer it to some suitable employment for their body, but because, too often, no suitable employment for their body is accessible to them.

It is towards this removal of causes that predispose towards ill-health in the moral sphere, ill-health as shown by a lack of energy, promptitude, power of work and endurance in the mind, that the training of the body, as we have attempted to outline it, is largely and unceasingly devoted. Health, as we understand it, the condition, that is to say, not of the ordinary man who considers he is "well enough," but that higher health which is the result of training the body to quickness, energy, and so to strength, which implies an obedience to the reason in matters of food and stimulants, directly benefits a man's moral and mental life. The body "is in subjection"; it obeys with less struggle the dictates of the non-material part of man, and it obtains in itself a greater resistive power to temptations of laziness or lust, just as it obtains a greater resistive power to its own purely physical enemies of cold or fatigue. It is in this respect, therefore (a far higher consideration than mere physical fitness), that we put forward a system of training that will be likely to ensure such results, and that consequently we regard the obedience to laws of bodily health, and means of physical fitness, as partaking of the nature of duty. And this further: it is clearly accepted as man's duty that he should keep his mind and his morals in the highest and best possible state; but seeing how intimately both these are knit with his body so that none can act without the other, the soul sinning through the body, the mind dictating every movement, is it reasonable to suppose that a corresponding duty is not laid on man with regard to the health of his body? Is it not, in fact, directly his duty to keep his body, as well as his soul and mind, in its highest and best possible state? No doubt compromises have often to be made; a man, in order to do his work, may be obliged to disregard certain rules which the health of his body requires should be kept. But saving this, there seems to us to be a clear duty with regard to physical health, quite apart from the advantage which physical health will bring to his mind and morals. This wonderful machine is a servant, no doubt, of the mind, but shall the master keep it, so to speak, in an insanitary attic, and pay no regard to its health? The compromises also, which we have just spoken of, will be rarer if the body is well, since it will

be more capable of bearing fatigue and unreasonable hours of work.

The simple, but unswerving principle on which morals are based, the highest development of the mind, the utmost health of the body: these things, and nothing short of them, are the results of ideal training.

WHAT PHYSICAL CULTURE HAS DONE FOR ONE MAN.

There has necessarily been a great deal of preaching of principles in this section of our work. A practical instance will show the truth and the sound basis upon which this preaching rests.—[C. W.]

AN interesting case, showing what physical culture can do for one, is that of Mr. Clarence Verrill, Yale '90, a son of Professor Addison E. Verrill of Yale.

As a child Verrill was so sickly, even puny, that all physicians consulted agreed there was little hope of his living to grow up. However, Verrill determined he would live, and scientifically thought out his own cure, which was, in brief: fresh air, exercises for heart, lungs, muscles, etc., and plain nourishing food.

He began his physical training at about the age of fourteen, starting with free gymnastics morning and night. These he did faithfully for one year, when he increased the work by using half-pound dumbbells, which he continued to use for two years. The next weights with which he exercised were two and a half pounds for a year, then increasing to five and six pounds, which from this time on he usually employed for general exercise.

Mr. Verrill was not a believer in the use of heavy weights in building up one's muscular system, being convinced that the perfect combination of "steel and india rubber" was the result of using light weights. No muscles were neglected—each exercise being carefully studied out to obtain the best results.

Mr. Verrill entered the Sheffield Scientific School at Yale at the age of sixteen, in the class of '97, but owing to ill health was obliged to leave college for a year. During this period he lived much in the open air and went into all kinds of athletics.

Upon his return to Yale in the autumn of 1897, he made it his habit to exercise at the gymnasium daily, and as a result of his work, when his strength tests were taken early in April, it was discovered that he had broken all college records, and was beyond question the strongest college student in America.

Dr. Seaver, who is an authority on anthropometry and physical examinations, said at the time, that he had never measured a more symmetrically or beautifully developed man than Verrill.

Mr. H. G. Watson, M. A., Assistant in Anthropometry at Yale, speaking of Verrill, in an article which appeared in a leading maga-

mine at this time, says, a great fascination to those interested in physical training lies in "the wonderful feats of Verrill, who was in his younger days a delicate child, but by constant training for the sake of health has developed into a man of muscle and strength, and is to-day a model of the Greek ideal and the strongest college student in America."

Although Mr. Verrill did not believe in the use of heavy weights for the development of his muscles, after they were developed much of his work was done with them, fifty and hundred pound bells being chiefly used.

Mr. Verrill has always made it a point to live as much as possible out of doors. During three years he rode his bicycle over 30,000 miles. While making no claim to excel in any one line of athletics, Verrill is a good all-round athlete. He was captain of the baseball team at his preparatory school (Norwich Academy), played on the football eleven, and won several prizes in track athletics, breaking the school record in the broad jump.

During his college years, he rowed in his class crew in freshman year, and while taking a post-graduate course, rowed substitute on the 1904 crew. He has won several medals in four-mile swimming races, and is locally well known as a boxer, fencer, and wrestler. Among his "stunts" are the front and back levers on the horizontal-bar, the pull up with one hand several times in succession, and the crucifix on the rings.

Contrary to the practice of most college athletes, Verrill has never given up training, and his development for a man is quite as remarkable, proportionately, as when at the age of nineteen he broke all previous college strength test records.

A GLANCE AT THE HISTORY OF PHYSICAL EDUCATION IN THE UNITED STATES.

BY

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THE rise of physical education in the United States has been slow and fitful. Its history, which presents a general parallelism to the course of the development of physical education in Europe, may be divided into periods as follows.

1. The period from the War of the Revolution to 1825. The claims of physical training received favorable mention from several critics

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of existing education in the earlier part of this period. Toward its close the imagination of educational reformers was actively stimulated by European experiments and examples.

2. The period from 1825 to 1830, which was marked by active discussion and enthusiastic but short-lived experiments on lines suggested by foreign experience.

3. The period from 1830 to 1860, a period of reaction and quiescence, for the most part, though a renewal of interest became manifest towards its close.

4. The period from 1860 to 1880. In this period the present widespread athletic movement had its beginning, and a revival of interest in gymnastics took place, particularly in colleges and preparatory schools.

5. The period from 1880 till the present time, which has been signalized by active growth and diversified expansion in all departments of physical training. More has been accomplished in this period than in all the preceding periods taken together toward securing a place for physical training in the curriculum of the elementary schools, and unexampled activity has been shown in the erection of club, school, and college gymnasias and the establishment of athletic fields and city playgrounds. One of the most characteristic and praiseworthy features of this period has been the establishment of schools and courses for the normal training of teachers of gymnastics.

The prehistoric period of physical training in America, or the period in which writers and reformers were satisfied with recommending bodily exercises as worthy of a place in education, lasted into the first quarter of the nineteenth century. Even before 1800 influential and outspoken critics of what then passed for liberal education arose. Foremost among them were Benjamin Franklin, Benjamin Rush, both of Philadelphia, and both signers of the Declaration of Independence; Thomas Jefferson, its author, and Noah Webster, the lexicographer.

Dr. Franklin in 1743 drew up a scheme for the education of youth in Pennsylvania. He planned for the establishment of an academy, "if not in the town, not many miles from it; the situation high and dry, and, if it may be, not far from a river, having a garden, orchard, meadow, and a field or two." He recommended "that the boarding scholars diet together, plainly, temperately, and frugally," and "that to keep them in health, and to strengthen and render active their bodies, they be frequently exercised in running, leaping, wrestling, and swimming."

Thomas Jefferson in 1785, in a letter to a young man concerning his reading and studies, advised him to give two hours "every day to exercise, for health must not be sacrificed to learning; a strong body makes the mind strong." He expressed a preference for gunning and walking. "Games played with the ball and others of that nature are

too violent for the body and stamp no character on the mind." In 1818, in his draft of a plan for a university in Virginia, he says: "We have proposed no formal provision for the gymnastics of the school, although a proper object of attention for every institution for youth. . . . The manual exercises, military maneuvers, and tactics generally should be the frequent exercises of the students in their hours of recreation. . . . Needing no regular incorporation with the institution, they may be left to accessory teachers, who will be paid by the individuals employing them, the university only providing proper apartments for their exercise."

Noah Webster seems to have been the first American of note to propose the institution of a college course of physical training. In an "Address to yung gentlemen," dated Hartford, January, 1790, he says it should be "the buzziness of yung persons to assist nature and strengthen the growing frame by athletic exercizes. . . . When it is not the lot of a yung person to labor in agriculture or the mekanic arts, some laborious amusement should daily be pursued as a substitute, and none iz preferable to fencing. A fencing skool iz, perhaps, az necessary an institution in a college az a professorship of mathematics." He further recommends running, football, quoits, and dancing as suited to the needs of sedentary persons.

Dr. Rush, in an essay "On the amusements and punishments proper for schools," dated August, 1790, proposed that "the amusements of our youth shall consist of such exercises as will be most subservient to their future employments in life." The amusements he favored were "agricultural and mechanical employments," and he notes with approval that the Methodists in their college in Maryland "have wisely banished every species of play."

Quite naturally the most comprehensive schemes proposed for the physical education of American youth were of a military character. In January, 1790, President Washington transmitted to the first Senate of the United States a report from General Knox, the Secretary of War, recommending the enrollment and military training of all men between the ages of 18 and 60. His plan, which failed of adoption, called for the formation of "annual camps of discipline" in each State. In these camps "the advanced corps," composed of the "youth of eighteen, nineteen, and twenty years of age," was to receive its schooling in the art of war. It was provided that "no amusements should be admitted in camp but those which correspond with war."

In 1817, in response to a suggestion from President Madison, a report was made to Congress upon the reorganization of the militia, in which it was recommended "that a corps of military instructors should be formed to attend to the gymnastic and elementary part of instruction in every school in the United States, whilst the more scientific part of the art of war should be communicated by professors of tactics to be established in all the higher seminaries." This scheme did not receive the sanction of law, either in 1817 or in 1819,

when it was brought forward again. The credit for the first considerable successes in combining physical with mental training in America should be awarded to the United States Military Academy at West Point and to certain schools modelled on it while it was still young. Physical training at West Point has a continuous history of nearly ninety years, since the administration of Major Sylvanus Thayer as superintendent, to whose shaping influence the West Point course of instruction owes its most salient characteristics.

In 1818 Captain Alden Partridge, Thayer's immediate predecessor at West Point, resigned from the United States Army, apparently for the purpose of attempting to reform the superior education of the country, whose defects, including an utter neglect of physical education, he vigorously criticised in his well-known "Lecture on Education." In 1820 Captain Partridge opened the "American Literary, Scientific, and Military Academy" at Norwich, Vt. In 1825, on the eve of his departure to Middletown, in Connecticut, where he started a similar seminary, he issued a card in which he claimed that at Norwich, his plan of "connecting mental improvement with a regular course of bodily exercises and the full development of the physical powers" had succeeded beyond his most sanguine expectations. Captain Partridge was directly concerned in the establishment or rehabilitation of no less than six military academies, two of which were opened in 1853, the year of his death. It does not appear that the example of the military academies had any appreciable effect upon the public school system of instruction in any city or State of the Union. During the civil war military drill became popular as a means of physical education for boys in private schools and high schools. . . .

Jefferson and Rush commended the use of tools as a form of exercise. Rush also favored gardening and agriculture as means of directing and training the rising generation. In accordance with the prevalence of such notions several farm, manual labor, and Fellenberg schools were started in various parts of the country prior to 1825.

In the early years of our second period a widespread interest in educational reform arose. In 1825 and 1826 physical education became a matter of almost epidemic interest in New England. Boston in particular was affected. The outburst was owing, in large measure, to contagion imported from abroad by exiles seeking asylum and employment; by scholars returning from foreign universities; by teachers fresh from pilgrimages to the wonder-working shrines of the new educational cult in Great Britain and on the Continent. Glowing accounts were multiplied by voice and pen of the revival of gymnastics in Europe, particularly in Germany, Switzerland, France, and England. At the same time physical education was vaguely conceived by many writers and lecturers as including pretty much everything that pertains to personal hygiene from the cradle to the grave.

Physical education fired the imagination of reformers for a time, but so did monitorial instruction, manual training, vegetarianism, and phrenology.

The Round Hill School, established at Northampton, Mass., in 1823, and the high school, founded in New York City in 1825 by Dr. John Griscom, each introduced many features that were novelties in the education of American boys, but their most striking innovations were copied from Lancastrian, Fellenbergian, or Pestalozzian schools in Europe. In both schools physical training was accorded a place in such wise as to fix the attention and stimulate imitation by a host of pedagogical adventurers. Although a rude attempt at gymnastic instruction was made in the Monitorial School for Girls in Boston, in the spring of 1825, the claim of Messrs. Cogswell and Bancroft, of Round Hill, that they "were the first in the new continent to connect gymnastics with a purely literary establishment" appears to be a valid one. The Round Hill gymnasium was opened in 1825. It was a "turnplatz" or outdoor gymnasium, laid out, fitted, and managed in accordance with the Jahn system of "turning." Dr. Charles Beck, the "instructor in Latin and gymnastics" at Round Hill, where gymnastics flourished for some years, had been a pupil of Jahn's, it is said.

Harvard College started the first American college gymnasium in one of its dining halls in March, 1826, and later in the same season a variety of gymnastic machines were put up in the playground known as the "Delta." Dr. Follen, an instructor in German and a German exile, who was familiar with the Jahn "turning," was the instructor and leader in gymnastics. The Boston Gymnasium, opened in the Washington Gardens, October 3, 1826, with Dr. Follen as its principal instructor, seems to have been the first public gymnasium of any note in the United States. Dr. Francis Lieber, who was warmly recommended by Father Jahn, succeeded Dr. Follen in 1827, Jahn himself having declined the invitation from the managers to assume charge of it. The patrons of the gymnasium, about 200 in number at its opening, rose to 400 in the first twelve-month, but dwindled to 4 in the second, it is said. A contemporary observer declared "no talent could keep the gymnasium alive after the novelty had ceased, and some of the gymnasts had been caricatured in the printshops." Gymnastic grounds were established at Yale in 1826, and at Amherst, Brown, and Williams in 1827, and fully a dozen schools, mostly in New England and New York, proffered to follow the example set by Round Hill and Harvard. Beck, Lieber, and Follen became college professors; the aims of gymnastics were not fully grasped, competent instructors were lacking, no one knew how to produce them, and so the whole movement lapsed into neglect and forgetfulness within five years of its beginning.

Between 1830 and 1860 there was no general or extensive revival of interest in gymnastics, and athletic sports led a feeble and incon-

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spicuous existence; but a crusade for popularizing the doctrines of physiology and hygiene set in which served to perpetuate the essential spirit of the period 1825-1830 and to prepare the way for the gymnastic revival that occurred just before the war broke out. This crusade, which had its beginnings at least as early as 1825, was greatly stimulated by the books and lectures of the phrenologists Spürzheim and George Combe, who aroused much interest among teachers, parents, and even medical men in the claims of their pseudo-science as the foundation of a natural and health-giving system of education. Through the multiplication of popular manuals of physiology, which usually contained much hortatory matter on physical education and sometimes set forth rules for gymnastic and "calisthenic" exercise, the general public came to entertain the notion that serviceable and disciplined bodies were much to be desired and that some sort of school machinery ought to be provided for the purpose of securing them. Soon after the collapse of the gymnastic movement a considerable party, including many benevolent and influential persons, arose which favored manual labor in preference to gymnastics. Between 1829 and 1835 very many enthusiastic attempts were made throughout the Atlantic and the then Western States to provide college and seminary students with facilities for gaining health, amusement, and money by means of agricultural and mechanical labor. The movement did not lead to conspicuously encouraging educational or pecuniary results.

This period was signalized by an unexampled interest in elementary education, which resulted in the rapid multiplication of common schools in the newer parts of the country and in radical improvement, as respects their organization and administration, of the public schools of the Eastern and Middle States. The educational literature of the time teems with articles, resolutions, and reports of discussions relating to physical education in the sense of personal and school hygiene—witness Barnard's Journal, the Proceedings of the American Institute of Instruction, the reports of Horace Mann, and a considerable list of text-books of physiology and manuals of calisthenics, etc. Both in the field of discussion and authorship, teachers as well as physicians played an active part. Hitherto the interest of teachers in physical education had been rather languid and vague.

While discussion was still rife in the United States, Dr. E. Ryerson, chief superintendent of schools in Upper Canada, supplemented his recommendation of gymnastics (contained in his report of 1846, by issuing a semi-official manual of free and apparatus gymnastics, and promised governmental aid toward the purchase of apparatus for use in the public schools. When in 1852, the new normal school for Upper Canada was opened, a gymnasium, in charge of "a master of the art of gymnastics," formed a part of its equipment. This was a year before the Boston school committee enacted the following rule: "The masters, ushers, and teachers in the grammar and writing schools

shall so arrange the daily course of exercises in their respective classes that every scholar shall have daily, in the forenoon and the afternoon, some kind of physical or gymnastic exercise." Probably this rule was passed in deference to views expressed by Mr. Nathan Bishop, first superintendent of schools in Boston, in his first and second reports. In his second report, that of 1852, Mr. Bishop declares that "every plan of classification in which the children have not frequent opportunities for practising physical exercises suited to their tender ages must be essentially defective," and he goes on to describe, in general terms, what he considered "a well-arranged series of exercises to call the muscles of the chest and limbs into healthful play." There is reason for thinking that Mr. Bishop had been instrumental in 1842 in promoting free gymnastics in the public schools of Providence, R. I., where he was then superintendent of schools. Mr. Bishop, it may be remarked in passing, was the first man in the country to be appointed a superintendent of schools.

After the failure of the revolutionary attempts of 1848 in Germany, there was a large influx of German Liberals into this country. Wherever the German immigrants settled in numbers "turnvereins" quickly sprang up. Thus a new factor, destined in later years to exercise a large influence in the development of American physical training, was introduced. In the North American "Turnerbund," which for over half a century has been the largest, most widespread, and efficient gymnastic association in the country, we have a genuine and vigorous offshoot from the German stock, but American educationists practically ignored its existence for more than a generation.

We have abundant evidence that there was a new and increasing interest in gymnastic and athletic forms of exercise in the latter half of the decade ending in 1860. Such evidence is to be found in efforts to raise funds for the building of school and college gymnasia, in the increased addiction of collegians and others to rowing and ball matches, in the instant popularity accorded the "Tom Brown" books, and in the prominence given to topics relating to physical education in general and school gymnastics in particular by speakers at teachers' conventions, by the conductors of educational journals, and by superintendents of public schools.

The time was ripe for a new movement, and in 1860 it broke out. Diocletian Lewis, usually called "Dr. Dio Lewis," is popularly considered a sort of gymnastical Peter the Hermit, to whose preachings and teachings the crusade of the new gymnastics was chiefly due. Most certainly he was an extremely active, fluent, and conspicuous evangelist; but his main service, as regards gymnastics, lay in the assiduity and shrewdness with which he raked together the embers and fanned the flames that had been kindled by others. It is evident that the gymnastic revival of 1860 grew out of the movement for disseminating knowledge of the laws of health and the consequent desire to have them effectually applied in the management of the

public schools. The gymnastic revival may be said to date from the meeting of the American Institute of Instruction in Boston, in August, 1860, at which Dio Lewis, who had recently established a gymnasium in the city, won a signal triumph for his "new gymnastics," which were unanimously pronounced "eminently worthy of general introduction into all our schools and into general use." Dio Lewis was singularly adapted, by reason of his energy and enthusiasm, and his gifts as a lecturer and writer, to command popular attention and create a following.

For some years before his advent in Boston, he had travelled extensively in the Southern and Western States as a week-day lecturer on physiology and hygiene and as a Sunday orator on temperance. Moreover, he had acquired some familiarity with German gymnastics, and had unbounded confidence in himself as an adapter of old, and an inventor of new, forms of exercise. His doctrines and methods, which were novelties and seemed original to most of his followers and imitators, spread rapidly over the country, and, if certain eulogists of his system are to be credited, even into "Europe, Asia, and Africa." Teachers and school managers, particularly in New England, showed unprecedented interest for a time in the "new gymnastics," which seemed destined soon to form a part of the curriculum of the public schools of the more progressive cities of the country, as well as in a multitude of private institutions. For instance, the school board of Cincinnati in 1861, and that of Boston in 1864, formally adopted schemes looking to the general introduction of instruction in gymnastics into their public schools; but these schemes, and most others like them, soon proved illusory and impracticable owing to a variety of reasons that it would be tedious to recount here. In Boston, where a special committee of the school board in 1860 recommended the adoption of the "Ling free gymnastics," vocal culture and military drill obtained the upper hand.

Dio Lewis achieved praiseworthy results by convincing the public of the utility of "light gymnastics;" i. e., exercises with hand apparatus and by popularizing school and home gymnastics for children of both sexes. Possibly his most considerable contribution to the cause of physical education was the establishment in 1861 of the Boston Normal Institute for Physical Education, which he "presumed to be the first ever established to educate guides in physical culture." That was a presumptuous statement, inasmuch as the Prussian Government had maintained a normal school of gymnastics in Berlin since 1851, the Royal Saxon Normal School for Teachers of Gymnastics, in Dresden, had existed since 1850, and the Royal Central Gymnastic Institute, of Stockholm, dated from 1814. The Boston Normal Institute had two terms a year, of ten weeks each, and in the seven years of its continuance 421 persons were graduated from it.

The civil war checked educational reform, and the interest excited by the gymnastic revival soon spent its force or was transferred to

military forms of drill and exercise. In the year 1860 the colleges of Harvard, Yale, and Amherst erected gymnasium buildings, but their example aroused but little emulation in other colleges until after the close of the war. Amherst College, in 1860, established a department of hygiene and physical education. Dr. Edward Hitchcock, Sr., served continuously as professorial head of the department since 1861. He introduced a system of periodical physical measurements which served to excite the interest of the students and as a criterion of their progress in growth. The main feature of the Amherst system of physical education was, and is still, a memorized musical drill with light dumbbells and marching exercises. Prior to 1880 Amherst's example in making gymnastics a compulsory part of college work had but little effect upon the other colleges of the country.

The building of college gymnasia was resumed after the close of the war, when a large contingent of young men who had been subjected to strenuous physical training in the army entered the preparatory schools and colleges. The influence exerted by this contingent in reviving and developing an interest in physical training was far more potent in the department of athletics than in that of gymnastics. Baseball and rowing, followed by football, developed rapidly and led to the multiplication of intercollegiate contests. The inadequacy of the facilities afforded by the older gymnasia for the indoor training of crews, teams, and individual aspirants for athletic honors had much to do with inaugurating a new era of gymnasium building and with improving the organization and conduct of the departments of "physical culture" in the leading colleges for both sexes, and indirectly aroused an imitative spirit in some preparatory schools. This era opened in 1879-80 with the completion of the Hemenway Gymnasium at Harvard University. This gymnasium, for whose erection and equipment Mr. Augustus Hemenway of Boston, a graduate of Harvard in 1876, had given the sum of \$115,000, surpassed in size, magnificence, and convenience any of the gymnasia then to be found in the country.

Since 1880 millions of dollars have been spent on new gymnasia, most of which have been modelled more or less closely upon the Hemenway Gymnasium. To Dr. D. A. Sargent, the director of the Hemenway Gymnasium since its opening, we owe the invention of the system of "developing gymnastics" which bears his name, and has been adopted very generally in the gymnasia of the colleges, the Young Men's Christian Associations, and the athletic clubs of the country. . . .

The completion of the Hemenway Gymnasium and the induction of Dr. Sargent as its director in 1879 gave a great impetus to the improvement of existing gymnasia and to the erection of new ones, while the rapid spread of the Sargent system of developing exercises led to a general reform in the organization and management of the department of physical education in very many colleges and fitting

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schools for both sexes and in those belonging to the Young Men's Christian Associations. The organization of athletic clubs, having elaborate and costly buildings and extensive playing fields, soon became the fashion. At present athletic fields are considered quite as essential as gymnasia in the collegiate and scholastic world. The growing demand for municipal playgrounds, bath houses, and gymnasia is a characteristic and hopeful sign of the times. . . .

Quite naturally, athletics constitute the most popular and obtrusive branch of physical training, and the athletic movement possesses greater power and volume than any of the allied movements which have been revived or originated since 1860. The American gymnasium is a semi-original creation that has been devised by the American architect to meet the expressed or fancied needs of the American athlete. All things considered, the athletic clubs, whose rapid increase in numbers has been one of the most notable features of the recent history of physical training, constitute the consummate and peculiar product of the athletic movement. There is nothing quite like them outside of America. They have done much toward developing the insensate spirit of rivalry, bordering on professionalism, which has wrought such mischief in school and college athletics, but comparatively little toward developing the educational side of physical training.

It is not my purpose to disparage athletic sports, which, when wisely regulated, afford invaluable means of mental, moral, and physical training for boys and young men, but the element of display and competition is so inseparable from athletic aims and methods, and proficiency in athletic specialties demands so much time and thought and requires such costly appliances as to preclude the general adoption of athletic sports as the principal means of securing the hygienic and educational ends of physical training for the mass of the school population, especially in urban districts.

Gymnastics, if rationally ordered and properly taught during the early years of school life, afford the best preparation that an aspirant for athletic honors can have. Aside from the question of expense, there is no good reason for prolonging purely gymnastic drill to the exclusion of the higher forms of gymnastics and of outdoor sports after a pupil reaches the age of 15 years. When the managers of our high and preparatory schools shall have learned their business as regards bodily training, they will, I believe, institute courses of instruction in gymnastics analogous to their elementary courses in languages and mathematics, so that their pupils shall be prepared to choose their athletic and gymnastic electives in quite the same way that they now choose their elective studies when the opportunity offers. When the schools do their duty in the premises, the colleges can give up the kindergarten and grammar school styles of physical education, and it will then be easier for them to solve the athletic problem. That question cannot be solved satisfactorily till it is

taken out of the hands of growing boys and professional or semi-professional trainers and coaches. . . .

The establishment in 1888, by Mrs. Hemenway, of the Boston Normal School of Gymnastics, which stands in the forefront among similar schools in the country, was an event of capital importance in the history of physical training in America, and takes rank alongside the gift of the Hemenway Gymnasium to Harvard University by her son, Mr. Augustus Hemenway. The course of study and training in this school has been widely influential in raising the standard of fitness for teaching school gymnastics. The number of private adventure schools devoted to the normal training of teachers of gymnastics has not largely increased since 1890, but the curriculum of most of them has been considerably expanded and strengthened, as is also the case with the public normal schools.

One of the most significant characteristics of the present movement for promoting physical training is found in the growth of the conviction, born of experience as well as of reflection, that teachers and directors of physical education need careful and thorough preparation for their work, and the measure of success attained by some of the normal and training schools devoted to the special teaching of the principles and practice of gymnastics that have been started or re-formed since 1880 affords ground for hope that the professional training of teachers of gymnastics will be more effectively organized in the future. In this connection special mention should be made of the "Turnlehrer Seminar," maintained by the North American "Turnerbund" in Milwaukee; the physical department of the Y. M. C. A. Training School at Springfield, Mass.; Dr. Sargent's Normal School, at Cambridge, Mass.; Dr. Arnold's Normal School, at New Haven, Conn.; the Boston Normal School of Gymnastics, and the Posse Normal School in Boston. Summer schools and courses, some of which are maintained by colleges, also abound, but as a rule the colleges and universities have done but little directly toward raising the standard of professional training for teachers of gymnastics and athletics. Women preponderate among the pupils and graduates of the existing schools for training teachers of gymnastics. How to redress the balance and render the field attractive to a sufficient number of competent and well-educated men is a problem as difficult as it is important. Although the attempts of the responsible leaders in education have been less vigorous and successful than could be desired, it should be remembered that they have been confronted by an unusual number of puzzling and novel problems. While educational authorities are still groping their way toward clearer views and better methods of organization and administration in respect to physical training, there can be no question that substantial and gratifying progress has been made in the department of school gymnastics since 1880. We may confidently expect even greater progress in the next twenty-five years.

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On the whole, the advancement of physical education in America has been greater in the past twenty-five years than in any other period of its history. Obviously the most striking and rapid expansion has been in the department of athletics. Strenuous and contentious sports appeal directly and forcibly to the instinctive yearning of growing youth for publicity and applause. The recrudescence of barbarism which has manifested itself in manifold ways in this country in recent years, notably in the influence attained by the sensational press, has served to stimulate the spread of athletics and render them one of the most obtrusive and profitable forms of popular amusement. The growing addiction of all classes to outdoor exercise and recreation has also tended to enhance the interest of old and young in games and sports, and has proved an influential factor in a widespread movement to provide the children and youth of congested urban districts with playgrounds, gymnasias, and bath houses. The passionate asceticism exemplified by the élite of the athletic world when "in training" has unquestionably had a laudable effect upon the imagination of the mass of scholastic youth who cannot aspire to athletic prominence, and contributed to the dissemination among them of more sensible views and practices as respects regimen and exercise. As a result, student morals and hygiene have improved.

For the most part the athletic movement owes its characteristic features to its devotees and the public. Faculties and boards of trust have done comparatively little—and much of that little ill—toward shaping and guiding the movement. Hence the best interests of rational and effectual physical training have suffered much in this country, and suffer still, from the disproportionate influence of athletic ideals and customs upon schoolboys and collegians. Latterly, criticism of the evils of rampant athleticism has increased in force and volume. In certain quarters governing boards and "athletic committees" have shown courage and wisdom in their efforts to abate extravagance and professionalism. Should their example prove contagious, it is probable that a new and devoutly to be desired era of well-regulated athletics will set in and that the educational value of clean sport will be much more generally apprehended and effectively availed of than has hitherto been the case. When that day comes, gymnastics and athletics will reënforce and aid each other as they should, and a long step forward be taken in the development of physical training.

The movement for the advancement of school gymnastics has slowly and fitfully but surely gained in force and volume with every new wave of interest in popular education. The extraordinary interest in the welfare of the public schools which swept over the country in the early nineties (which led to the introduction of many needed reforms and floated a variety of educational novelties into prominence), seems to have passed its flood, leaving many promising

schemes to survive or perish as best they may. Physical training has had to compete for favor and funds with the kindergarten, manual training, nature study, and other less laudable objects. Owing to that competition and the conflicting views and divided counsels of the professed advocates and exponents of all sorts of systems of school gymnastics, as well as to the inadequate supply of competent teachers, the general adoption of sound and practical gymnastic instruction in all grades of the public schools has not been attained. Still much has been gained in the field of discussion and of experiment. Not only more people, but more kinds of people, feel that no hopeful means of combating the untoward effects of school life upon the normal growth and development of the rising generation should be neglected. Consequently both the general and the educational public are disposed, as never before, to consider and even to admit the claims of physical training to a larger and more influential place in the public school system. Thus the way is being opened for clearer ideas as to the value and capabilities of the various forms of physical training, the character of the measures requisite to effectuate their ends, and the obstacles in the way of such means.

Although discussion is less general and lively than it was ten years ago, it has improved in tone and become more intelligent, discriminating, and profitable—theories and practical measures are subjected to more patient and searching criticism than at any previous time. Then, too, experimentation in this field is more general and better directed than heretofore, and a greater readiness to ascertain and apply the teachings of experience is apparent both among school officials and teachers of gymnastics. Discussion and experiment are proceeding so soberly, patiently, and fruitfully that (though there has been little of startling or dramatic progress in the field of pedagogical gymnastics recently) there is no ground for apprehension lest there should be a reversion to the condition which was generally prevalent prior to 1885. The problems of the education of the city school child and the problems of physical training are inextricably connected and interrelated, and must be met. The penalties of avoidance and inactivity are so sure and speedy that hereafter complete or long-continued neglect of physical training in the leading cities of America may be looked on as an improbable event.

When we consider the progress made since 1880 and the characteristics of the present time, there seems a fair prospect that when the next tide of keen and general interest in popular education begins to flood, the cause of sound physical training in both of its principal departments will be so quickened and advanced as to enter upon the stage of constructive development.

NOTE.—From the tone of many of the contributions in this Section it is evident that the onward movement described by Dr. Hartwell is in rapid progress, and is constantly gaining in impetus and volume.—[C. W.]

ANTHROPOMETRIC CHART.—MALE.

63	64	65	66	67	68	69	70	71	72	73	HEIGHT IN INCHES
100	110	118	125	132	138	145	153	160	170	180	WEIGHT IN LBS
64	65	66	67.5	68.2	70	71.2	72.5	74	75	76	ARM STRETCH IN INCHES
12	12.7	13	13.3	13.5	13.8	14	14.3	14.6	15	15.5	NECK GIRTH
29	31	31.5	32	33	34	34.9	35.8	36.7	37.7	39	CHEST, NATURAL
31	33	33.5	34	35	36	37	38	39	40	41.5	CHEST, INFLATED
25	26	26.7	27.3	28	28.7	29.4	30.3	31	32.2	33.5	WAIST
17	18	18.6	19	19.6	20.2	20.8	21.4	22	22.8	24	THIGH
12	12.4	12.7	13	13.4	13.8	14	14.4	14.8	15.3	16	CALF
9.5	9.9	10.3	10.6	11.2	11.6	11.8	12.4	12.8	13.4	14	BICEPS, ARM UP
8.6	9	9.3	9.5	9.8	10.2	10.4	10.7	11	11.5	12	FOREARM
14	14.5	15	15.2	15.6	16	16.4	16.8	17	17.5	18	SHOULDER BREADTH, INCHES
220	260	290	310	340	370	400	430	460	500	550	LIFT IN LBS
4	5	6	7	8	10	11	12	13	14	15	PULL UP, TIMES
60	66	72	78	84	90	98	110	120	135	150	GRIP IN LBS
170	185	200	217	233	250	267	274	300	315	330	LUNG CAPACITY, CUB. IN.
1	5	10	18	33	50	33	18	10	5	1	PER CENT.

ANTHROPOMETRIC CHART.—FEMALE.

58	59	60	61	62	63	64	65	66	67	68	HEIGHT IN INCHES
90	95	100	104	113	120	127	136	140	150	160	WEIGHT IN LBS
58	60.3	61.3	61.3	62.3	63.5	64.7	65.7	66.5	67.5	69.3	ARM STRETCH IN INCHES
11	11.4	11.6	11.8	12	12.2	12.5	12.8	13	13.3	13.8	NECK GIRTH
26	27	27.8	28.6	29.2	30	30.8	31.4	31.8	33	34.5	CHEST, NATURAL
28	29	29.8	30.6	31.2	32	32.8	33.4	33.8	35	36.5	CHEST, INFLATED
21	22	22.6	23.1	23.8	24.5	25.2	25.9	26.7	27.8	29	WAIST
16	19	19.6	20.1	20.8	21.5	22.2	22.9	23.7	24.8	26	THIGH
11.5	12	12.4	12.7	13	13.3	13.6	13.9	14.2	14.6	15	CALF
8.5	9.2	9.6	9.8	10.2	10.5	10.8	11.2	11.5	12	13	BICEPS, ARM UP
7.5	8	8.2	8.4	8.7	9	9.3	9.6	9.8	10	10.5	FOREARM
13	13.5	13.9	14.1	14.4	14.5	14.7	14.8	15.1	15.5	16	SHOULDER BREADTH, INCHES
80	100	112	125	145	175	202	235	260	280	300	LIFT IN LBS
30	35	40	45	50	55	55	60	65	70	80	GRIP IN LBS
80	105	117	128	140	150	160	170	180	190	200	LUNG CAPACITY, CUB. IN.
1	5	10	18	33	50	33	18	10	5	1	PER CENT.

To compare one's measurement with an average individual of the same height, first get all of the same measurements and tests given in the column at the right that can be conveniently obtained. These may be taken as follows:

- Height*—Without shoes. *Weight*—Without clothes, or deduct 4 to 10 lbs.
- Arm Stretch*—Distance from tip to tip of fingers; arms stretched sideways.
- Neck*—Girth in centre; take girth with a tape or string and measure on a rule.
- Chest Natural*—Arms hanging easily at the side; measure over the nipples on men and above the breasts on women.
- Chest Inflated*—Same measurements, taking as full a breath as possible.
- Waist*—At the smallest part. *Thigh*—At the largest part.
- Calf*—At the largest circumference.
- Biceps arm up*—At the greatest circumference arm bent up hard.
- Forearm*—At the largest part, arm extended, fist closed tight.
- Shoulder breadth*—With arms at side measure about 2 inches below the ends of the shoulder blades.

Lift—Grip and Lung capacity cannot be taken without proper instruments. *Per cent.*—These figures show that about 50 per cent. of men are 68 inches high. To plot measurements and compare them, mark the measurements on the line under the corresponding figures, i. e., height 64 inches under the figure 64 in the line of figures to the left of height. If the person measured is symmetrical, all the other measurements will be in the vertical column under 64. This, however, never occurs. If the weight is 137 pounds mark the line a proportionate distance to the right of the spot under 136, as at X on the female chart. When all the measurements are thus plotted connect the points by lines. The zig-zag line thus produced represents the individual as compared with the average of other individuals of the same height.

SELF CULTURE QUESTIONS.

BY F. H. CANN,

Director, Department of Physical Training and Athletics, New York University.

1. What great change has there been in our attitude towards Sports during the past 25 years? (p. 17.)
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3. Name some reasons why Physical Training is necessary. (p. 21.)
4. Name the Eight Great Laws of Sport. (p. 23.)
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6. What are some of the most striking experiences in the course of a balloon trip? (pp. 34-41.)
7. What is the Aero-Club of America? (p. 39.)
8. To whom do we mainly owe the purification of the game of Baseball? (p. 43.)
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10. Which Sport does President Eliot consider the best? (p. 65.)
11. Name some faults to be avoided in Rowing. (p. 71.)
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18. Who gave it its name? (p. 102.)
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26. Who is called the father of Lacrosse? (p. 148.)
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64. Why is early play better than gymnastics? (p. 294.) (See also p. 298.)
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94. Give a practical instance of the truth and the sound basis on which the teaching in this volume rests. (p. 398.)
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99. What is the system of developing Gymnastics mostly in use in America? (p. 407.)
100. What is the outlook for Sports, Pastimes, and Physical Training in our own country to-day? (p. 408.)

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